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AUTHORITY
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MC REPORT 011  
Volume 9

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AD 910344

# ACOUSTIC ENVIRONMENTAL SCENARIOS AND PREDICTIONS FOR ASW

VOLUME 9  
AREA 3B, SUMMER  
PREDICTIONS FOR PASSIVE SONAR

October 1972



LONG RANGE ACOUSTIC PROPAGATION PROJECT



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OCEAN SCIENCE PROGRAM )  
MAURY CENTER FOR OCEAN SCIENCE  
Department of the Navy  
Washington, D.C.

Director, Long Range Acoustic Propagation Project (ONR Code 102-03)

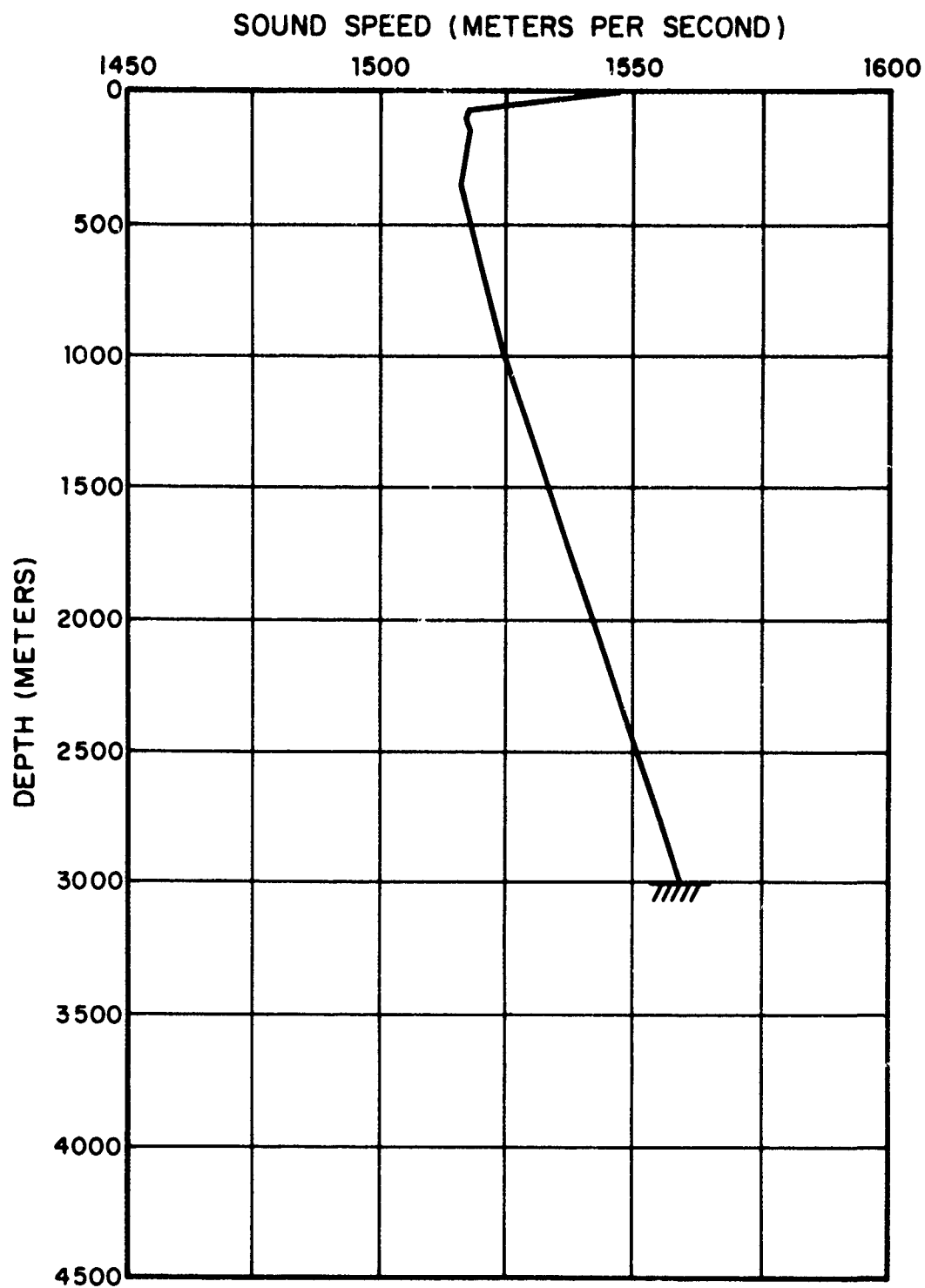
*Arlington, Va. 22217*

ACOUSTIC ENVIRONMENTAL SCENARIOS AND PREDICTIONS  
FOR ASW

Volume IX: AREA 3B SUMMER  
PREDICTIONS FOR PASSIVE SONAR

Refer to Volume I of this report for an explanation of the  
plot format and descriptions of models and ocean areas.





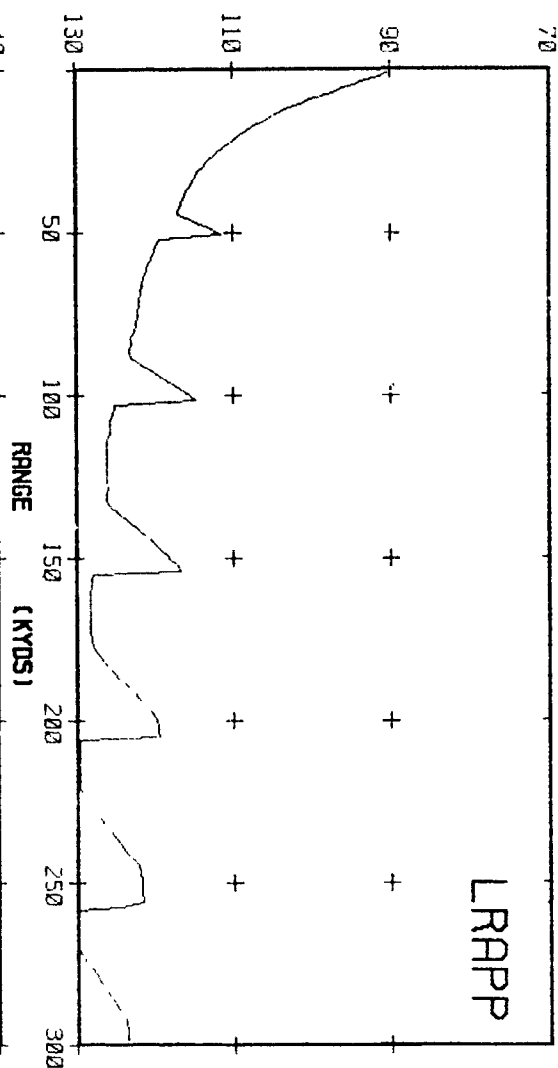
SOUND SPEED PROFILE  
AREA 3B, SUMMER

AREA 3B SUMMER

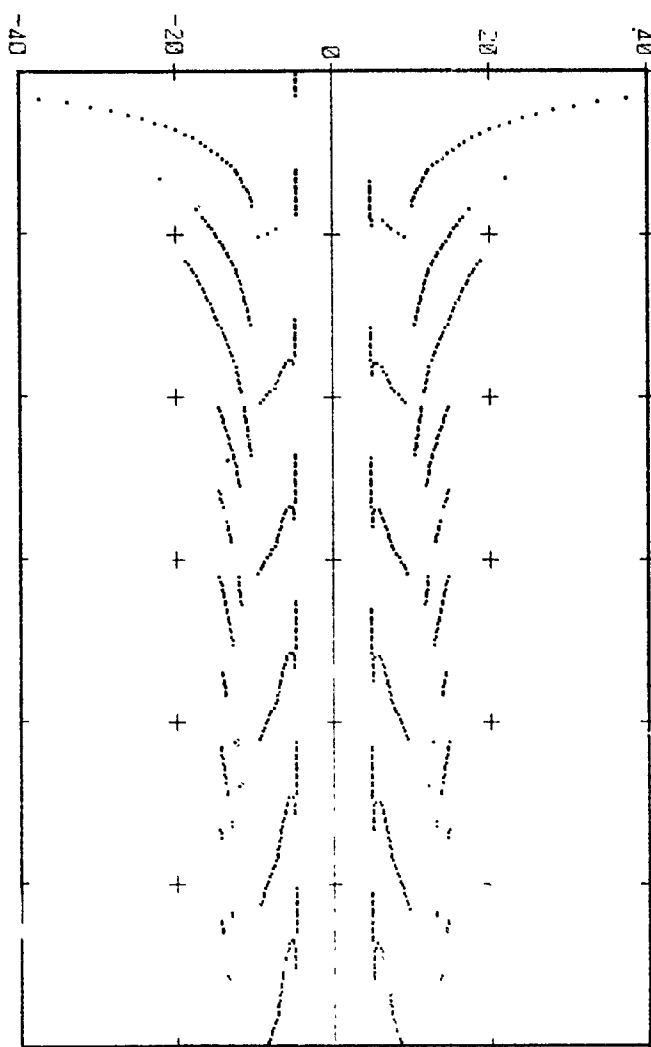
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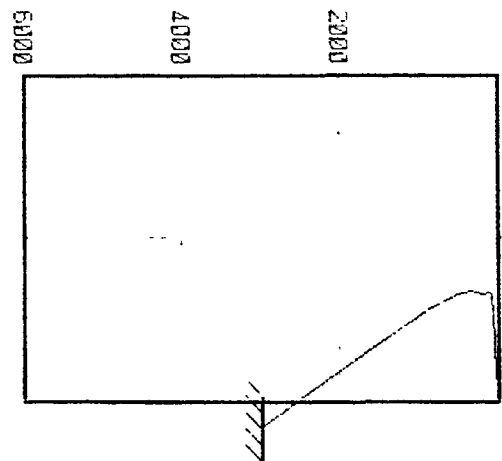
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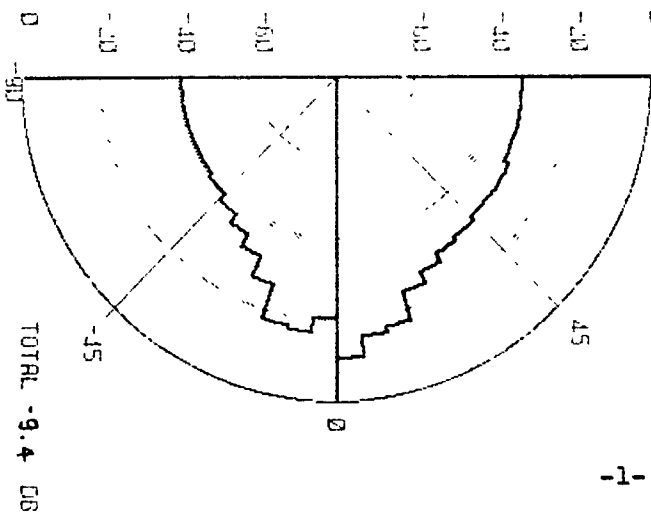
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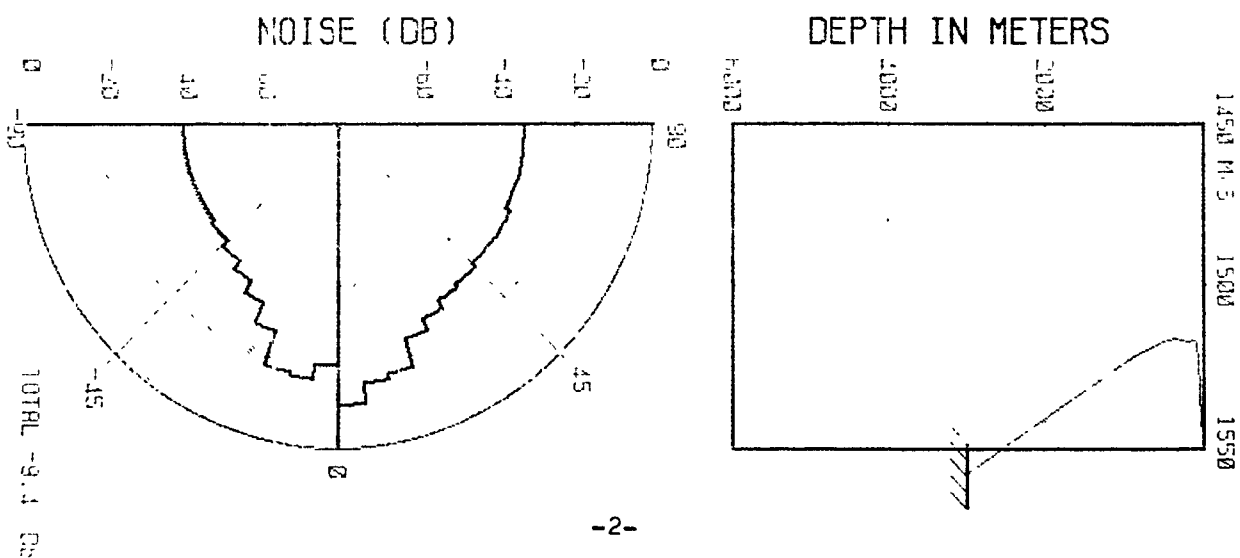
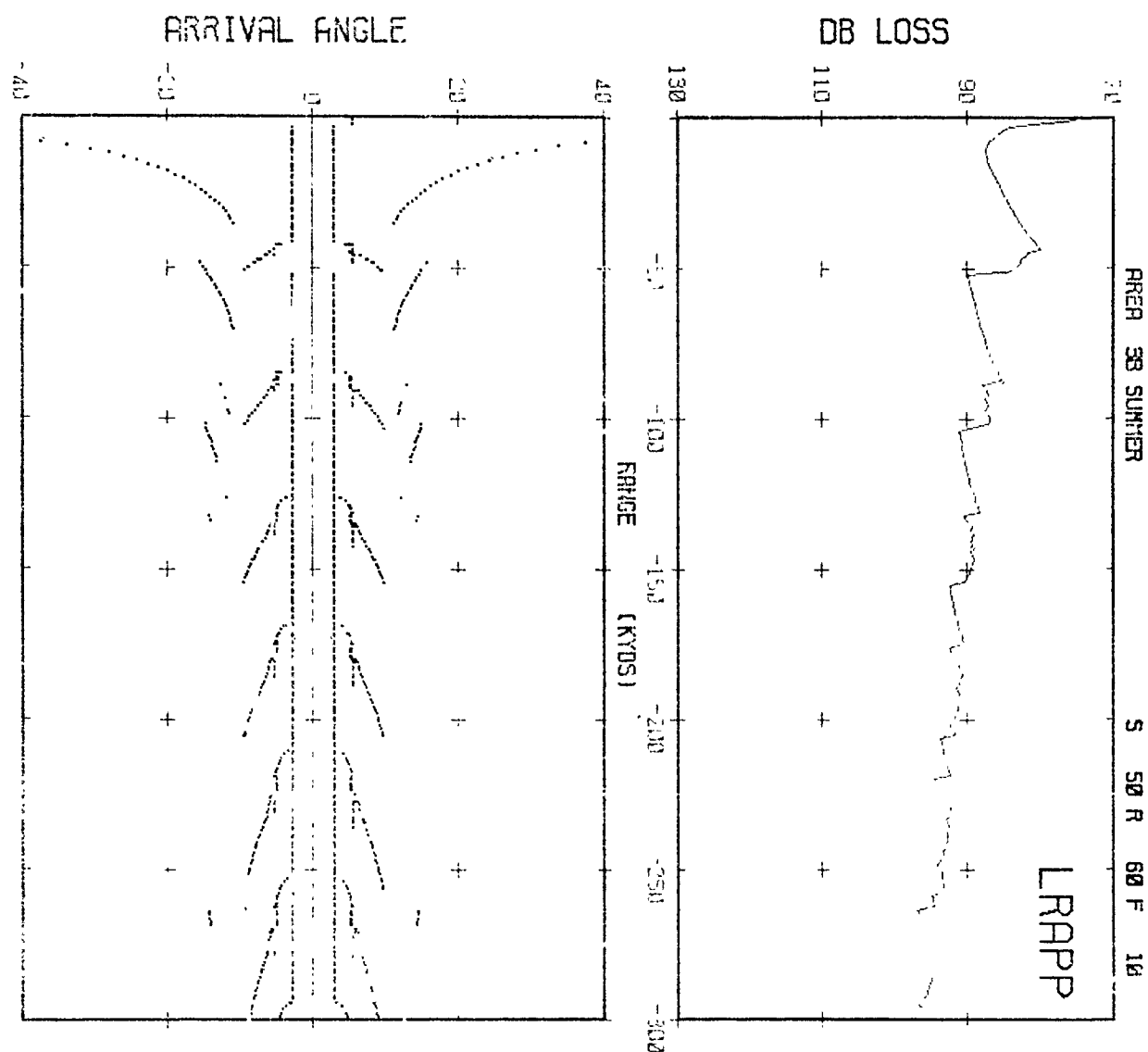


DEPTH IN METERS



NOISE (DB)



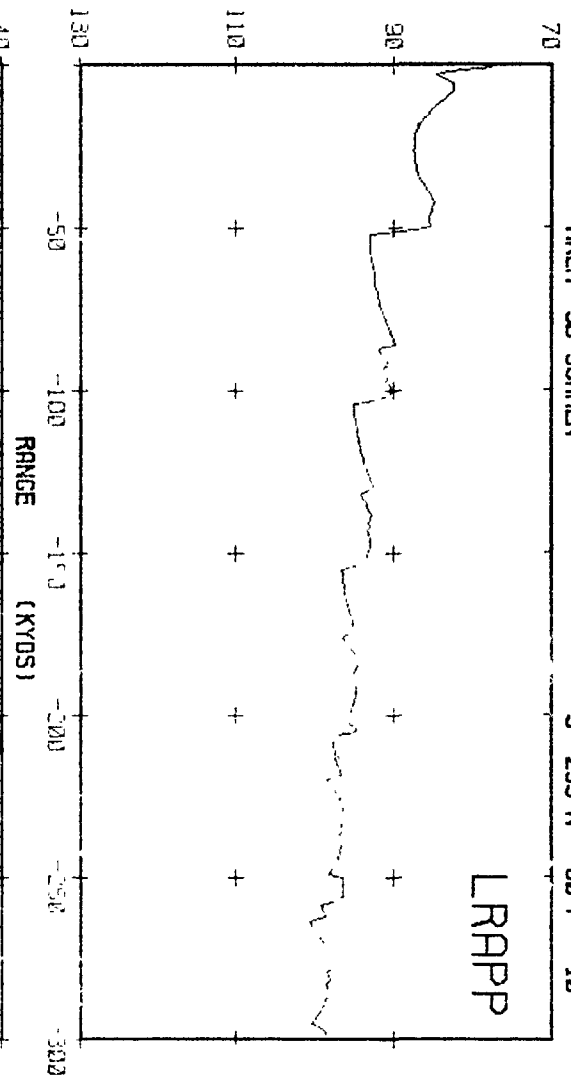


AREA 38 SUMMER

S 233 R 60 F 10

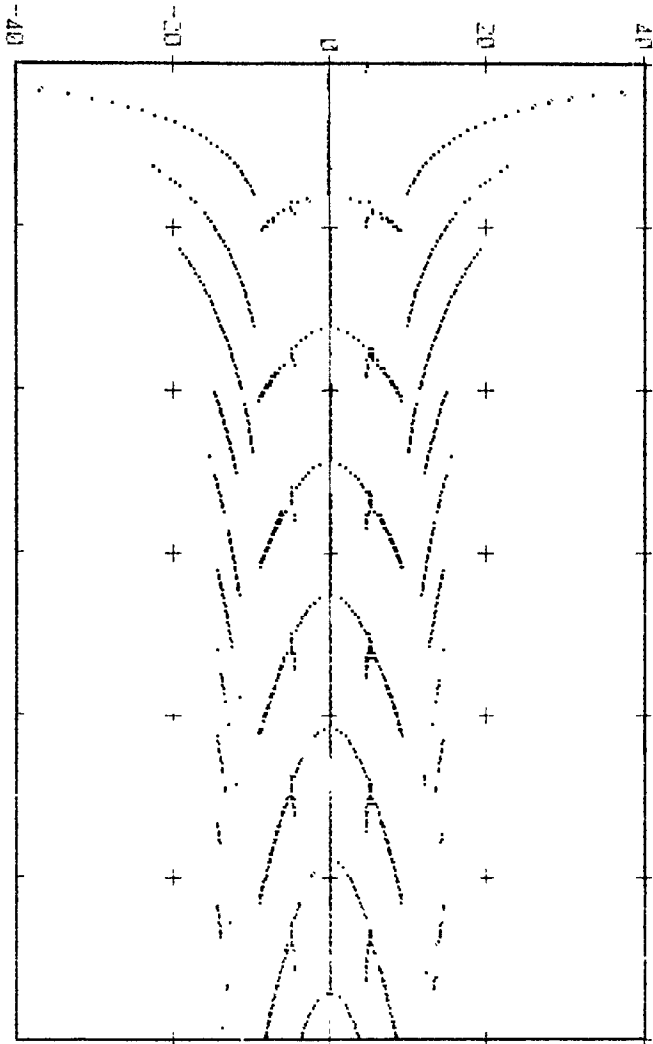
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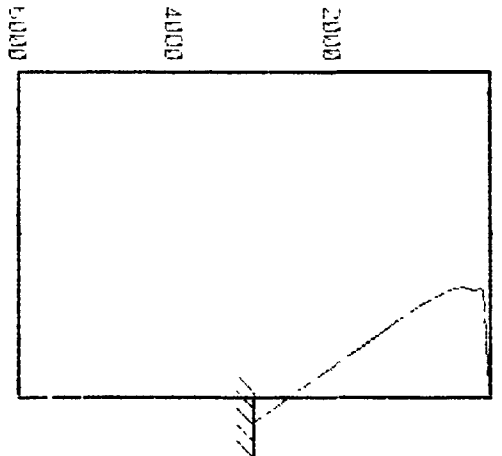


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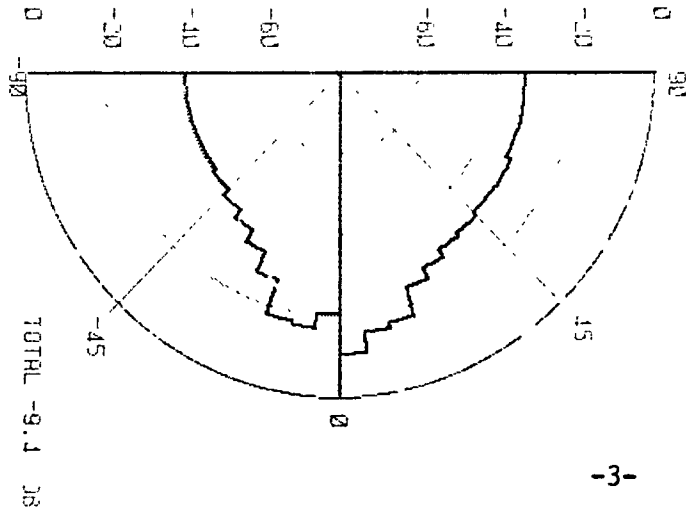
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DEPTH IN METERS



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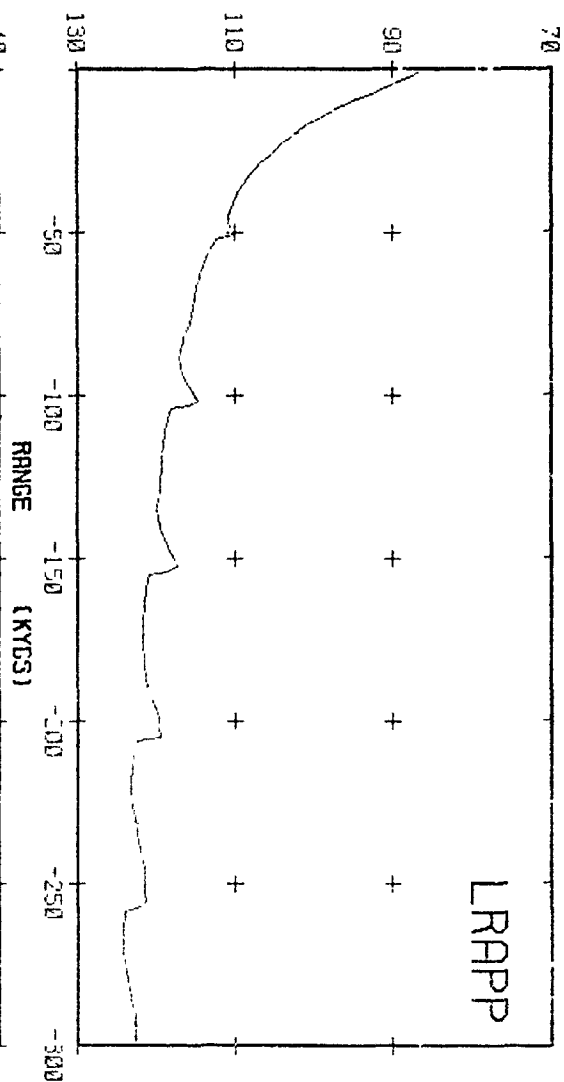


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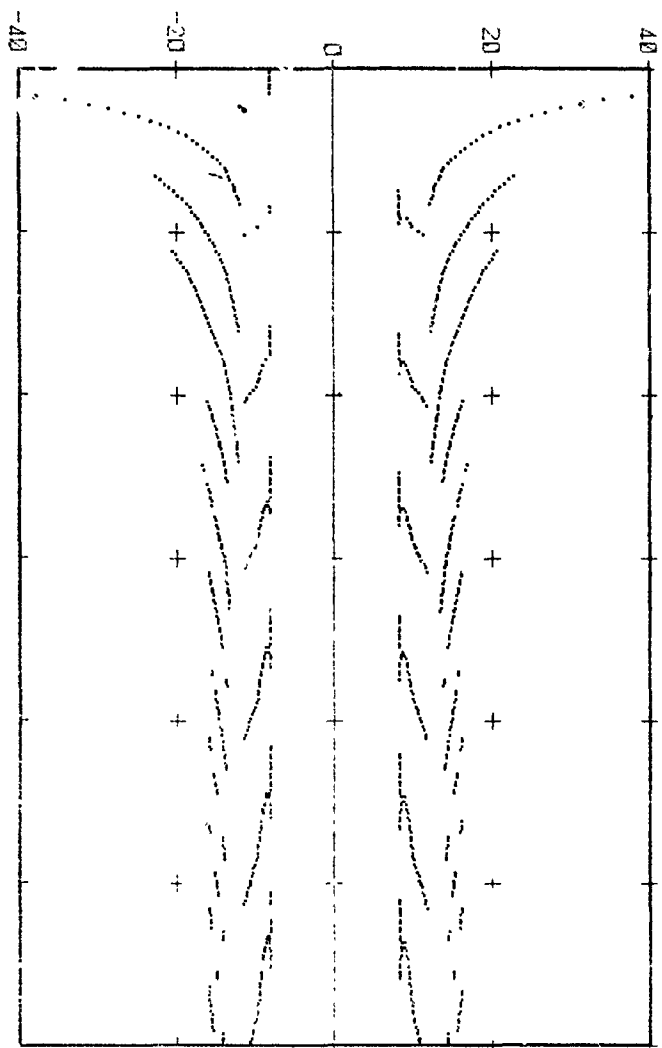
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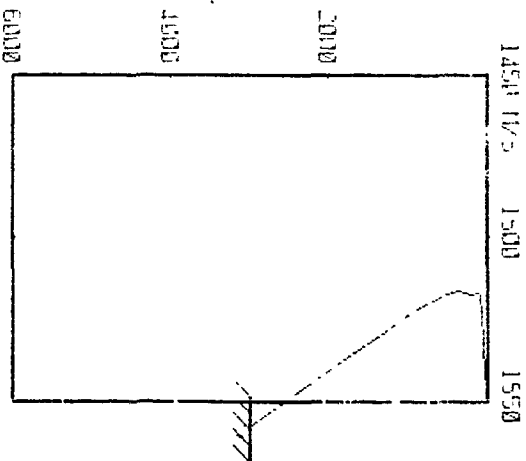
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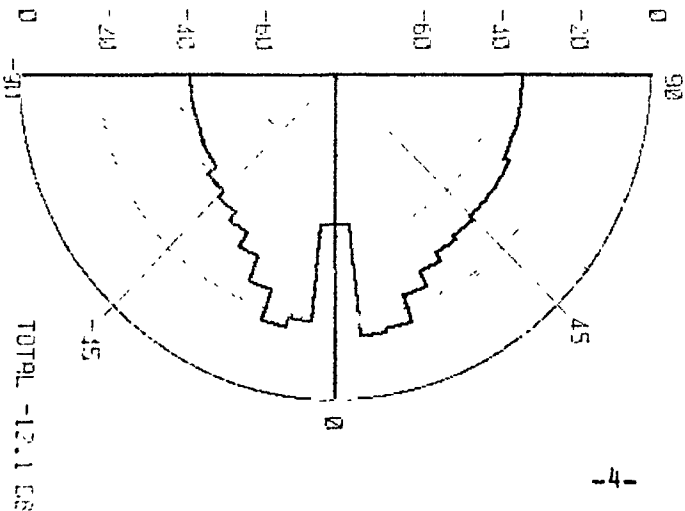
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DEPTH IN METERS



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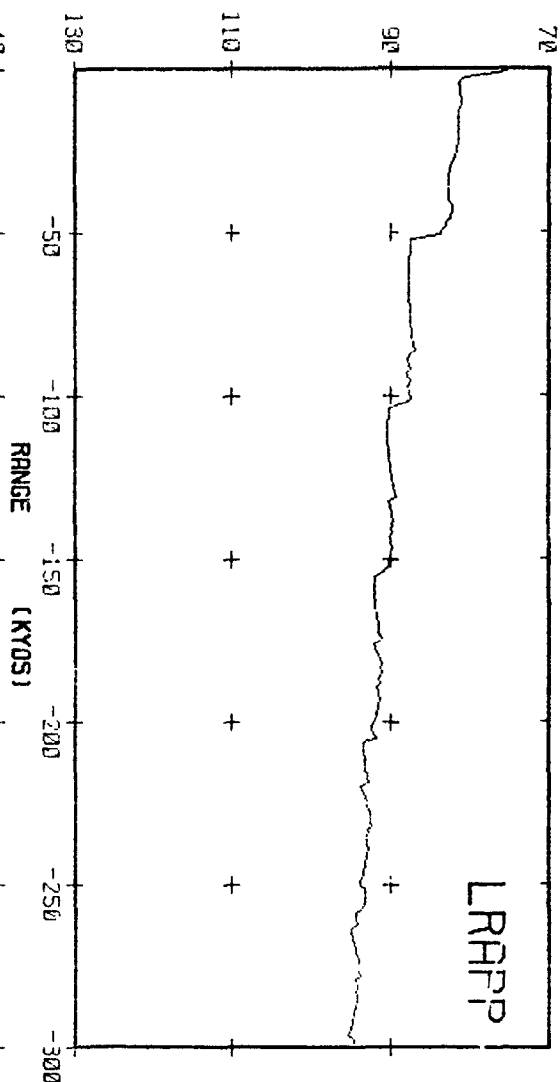


ARER 38 SUMMER

S 50 R 133 F 10

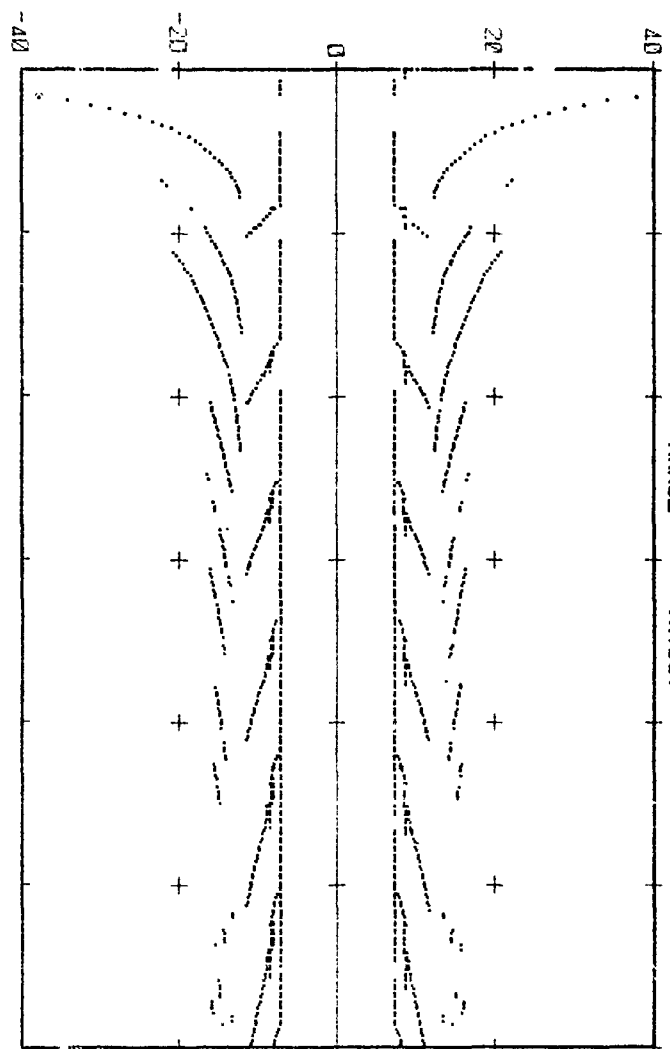
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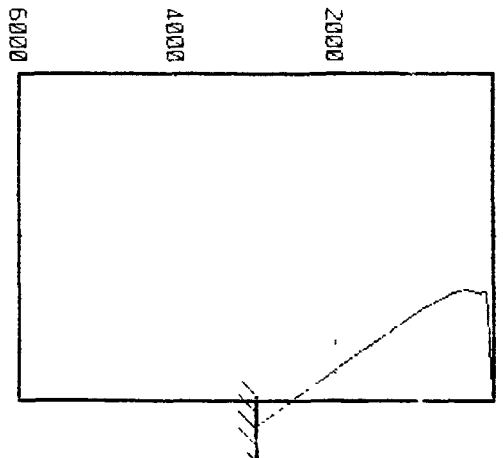


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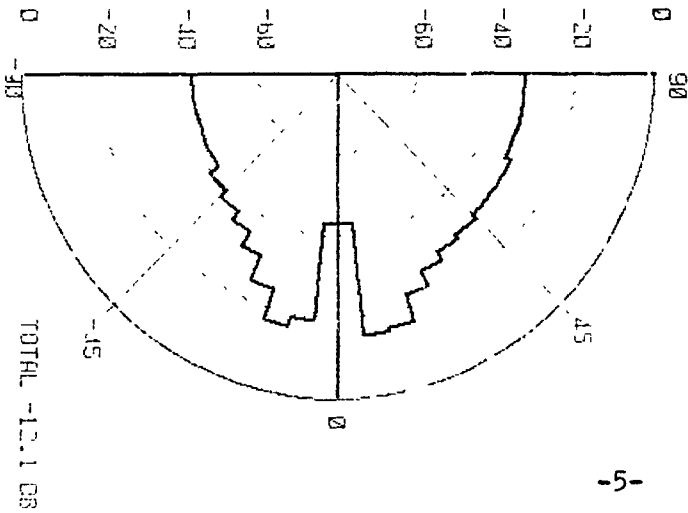
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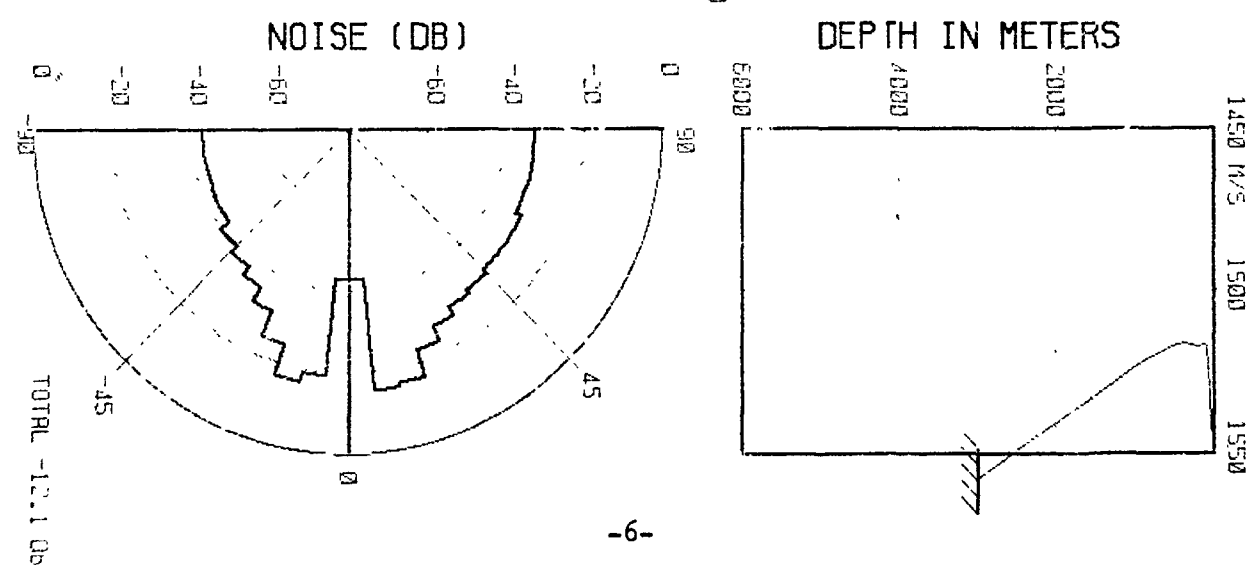
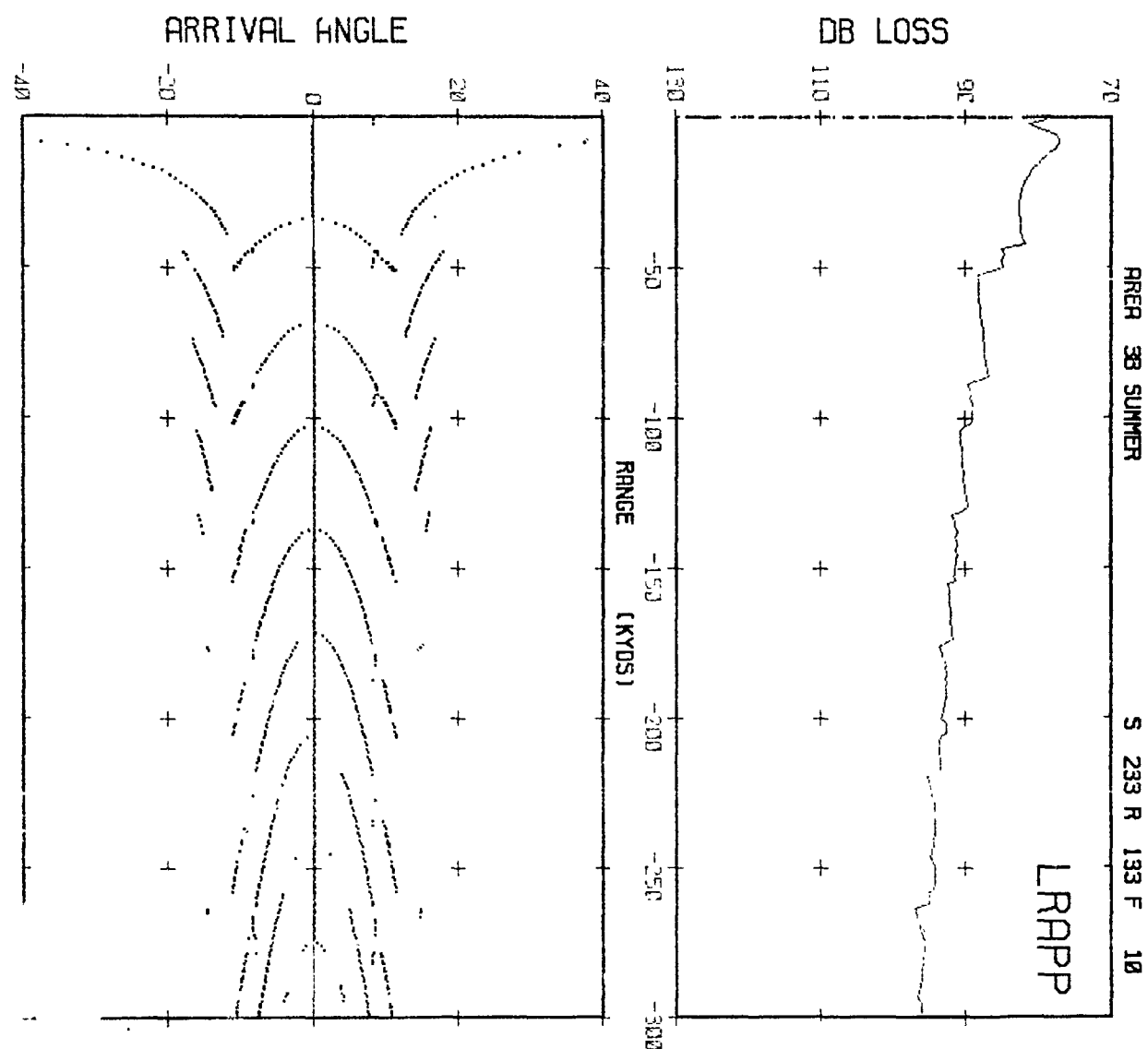


DEPTH IN METERS



NOISE (DB)



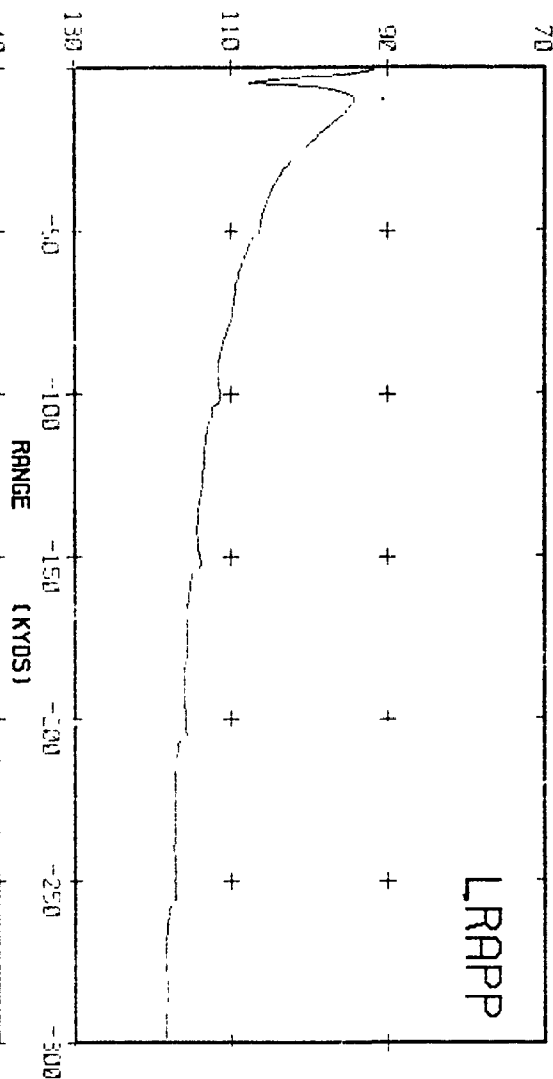


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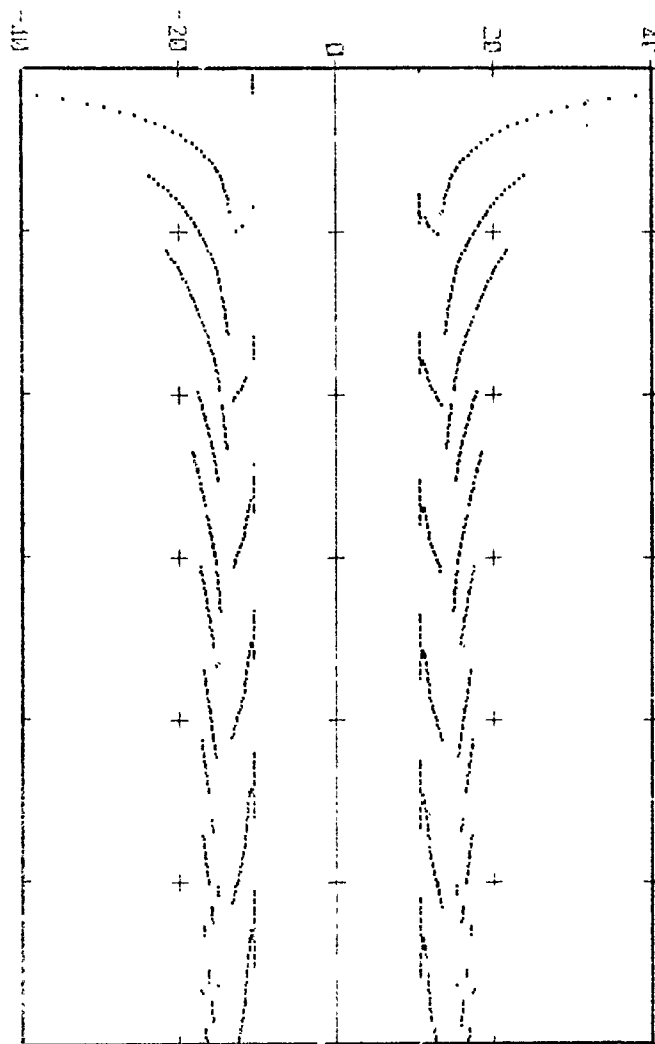
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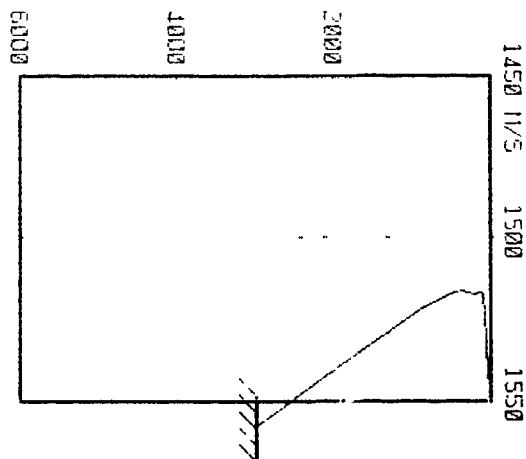
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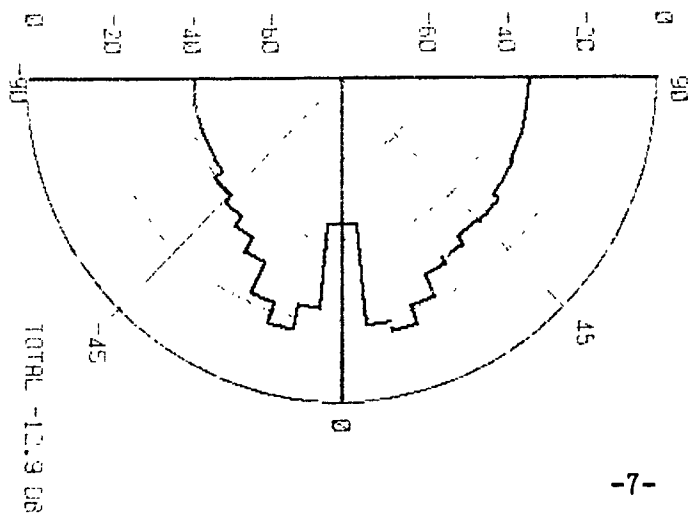
ARRIVAL ANGLE



DEPTH IN METERS



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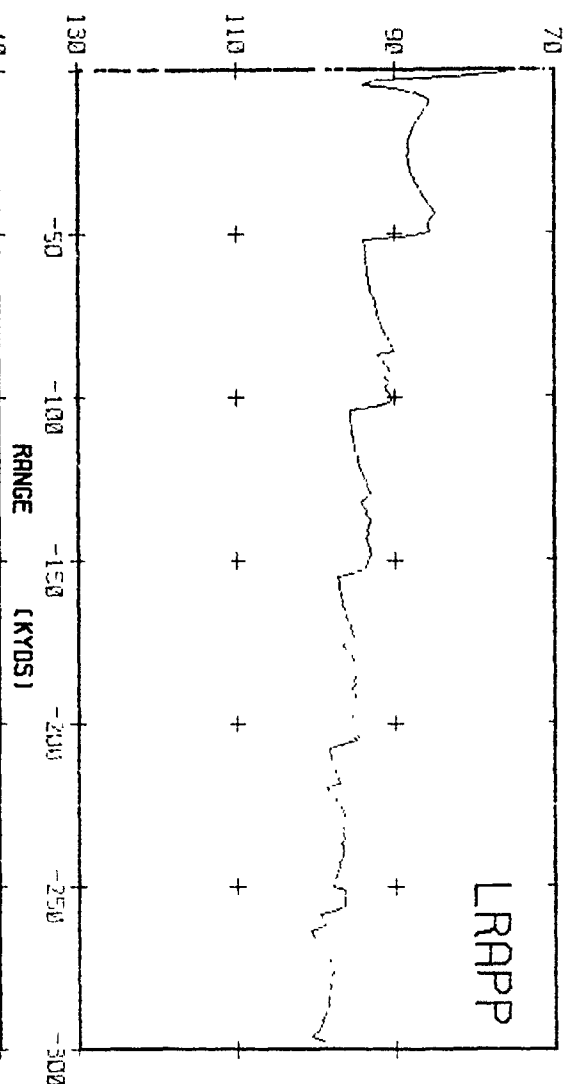


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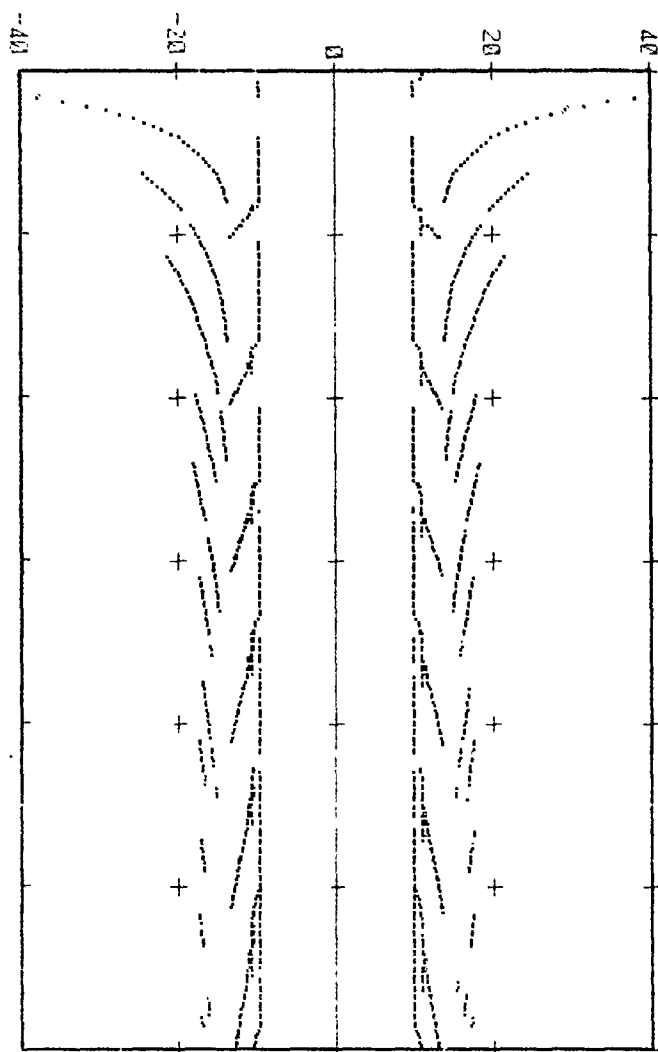
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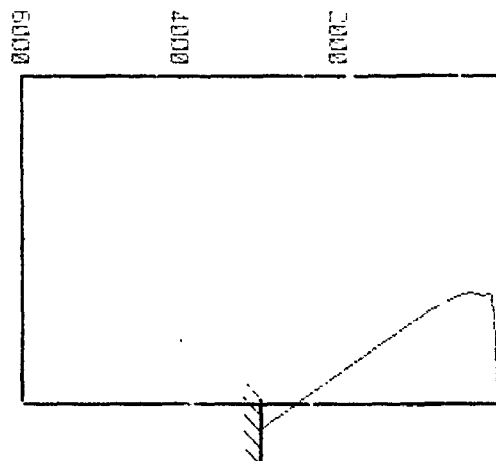
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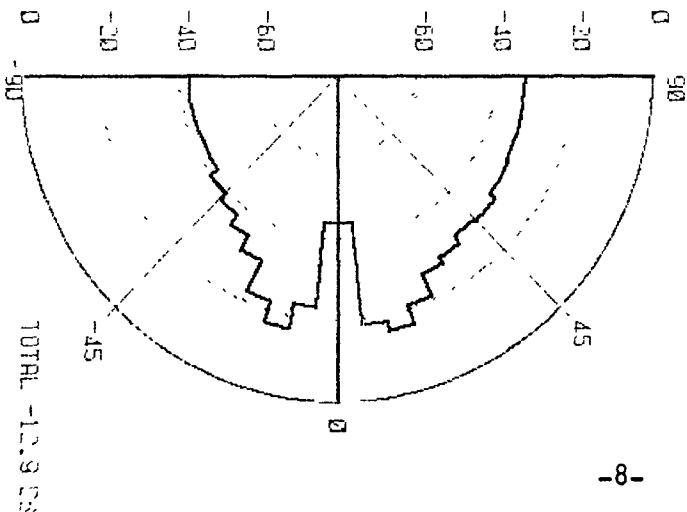
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DEPTH IN METERS



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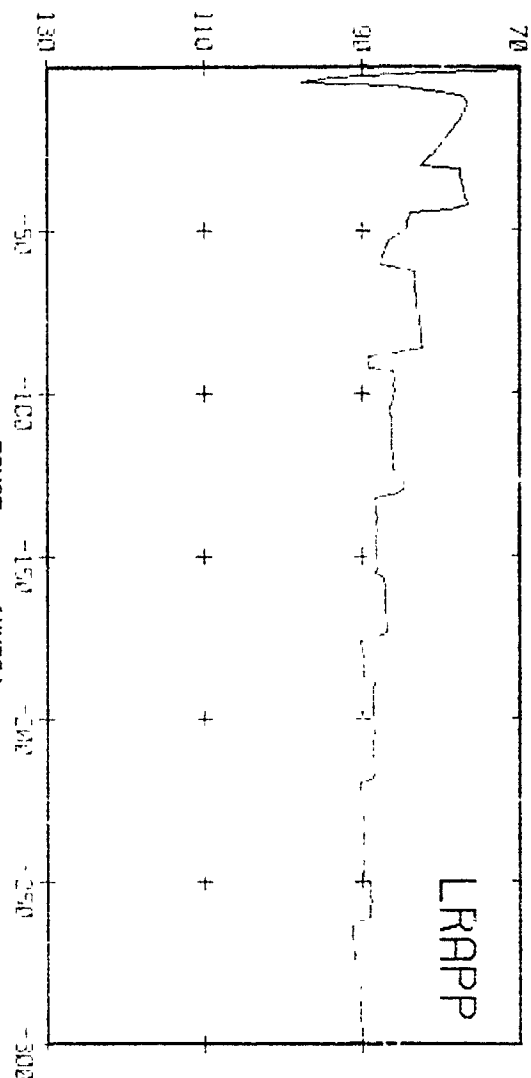


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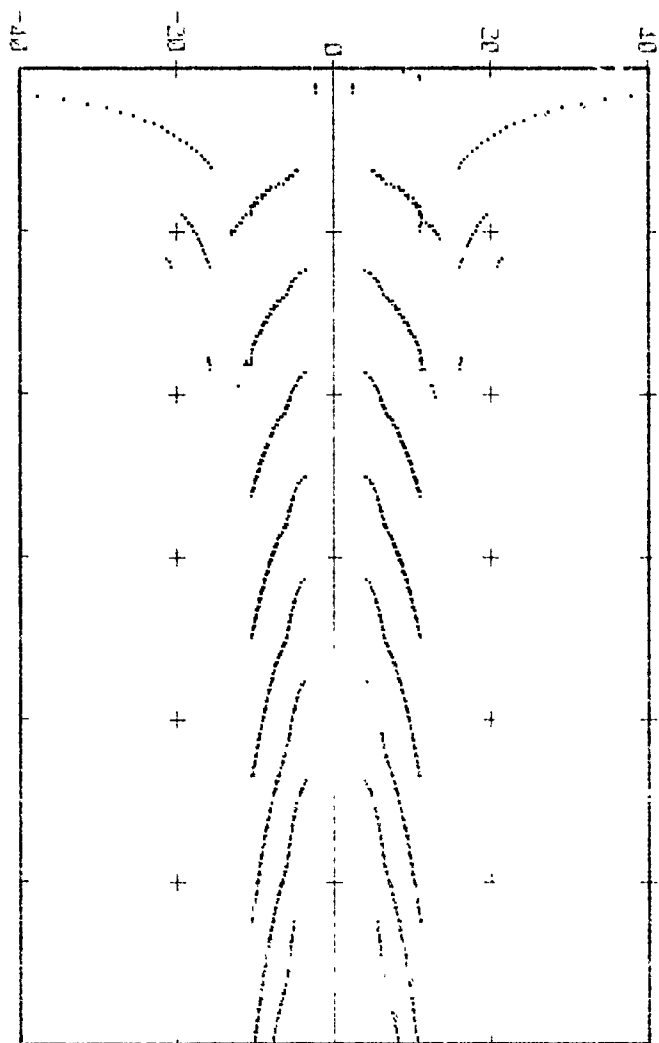
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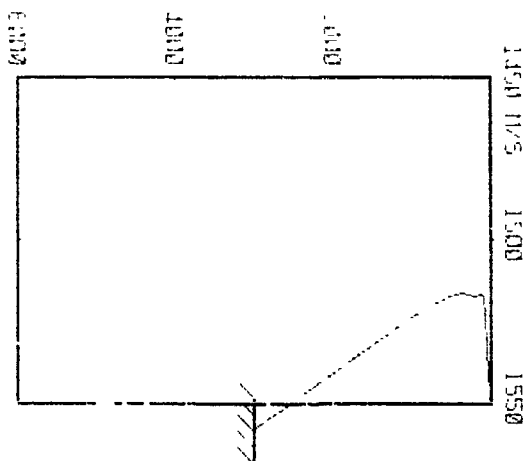
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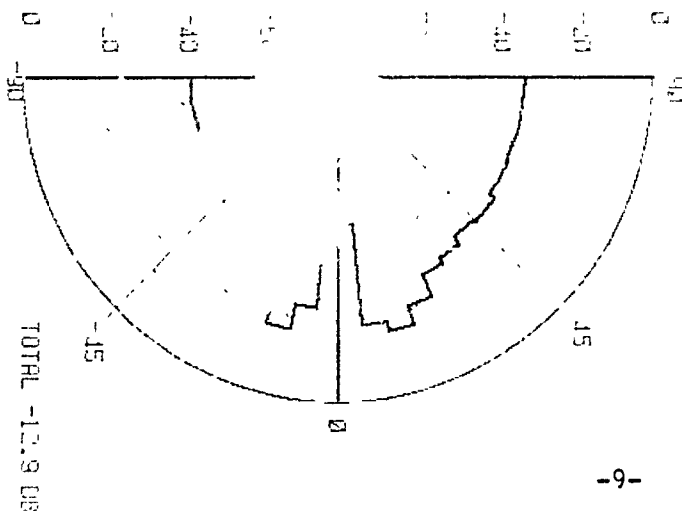
ARRIVAL ANGLE



DEPTH IN METERS



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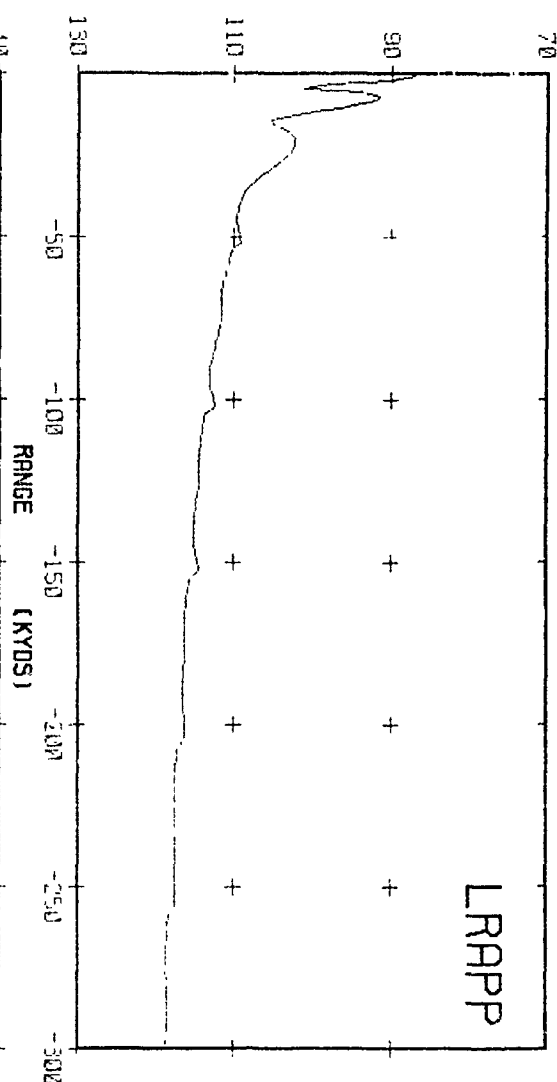


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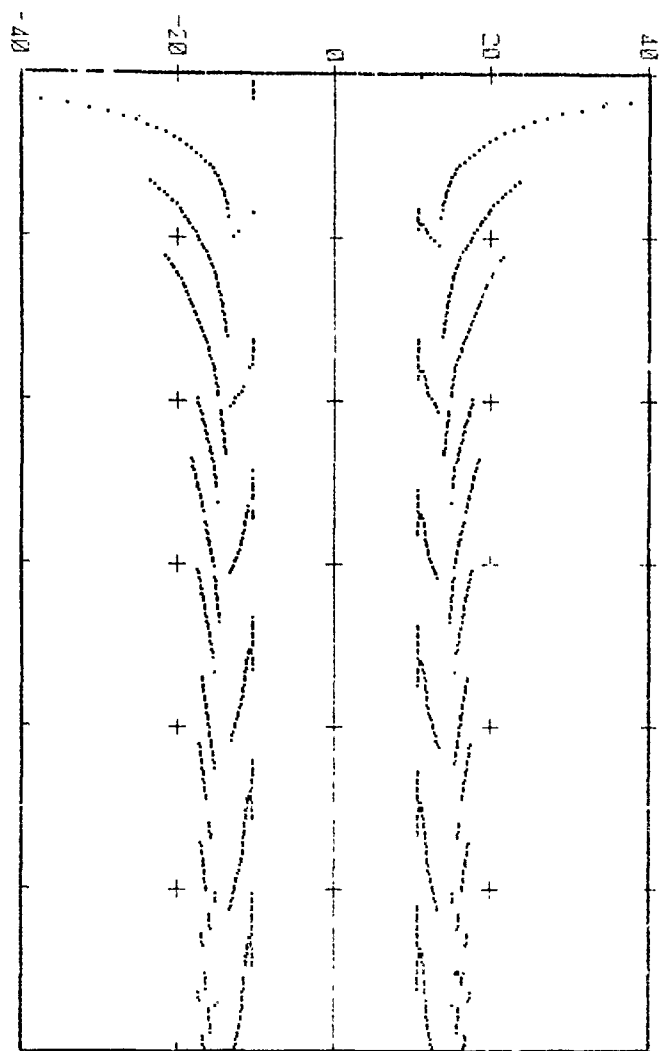
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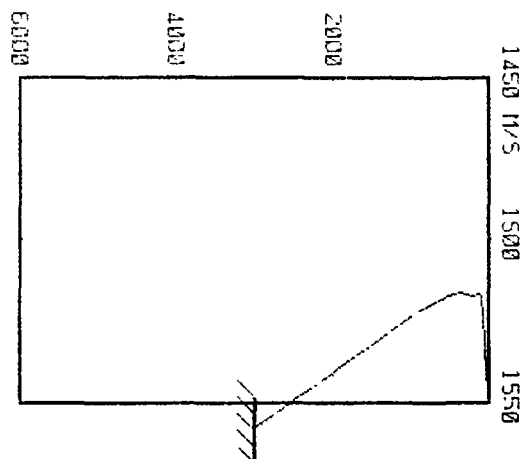
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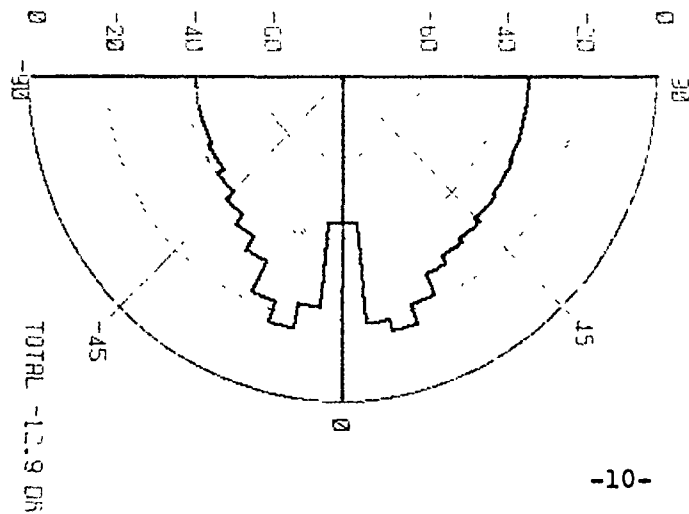
ARRIVAL ANGLE



DEPTH IN METERS



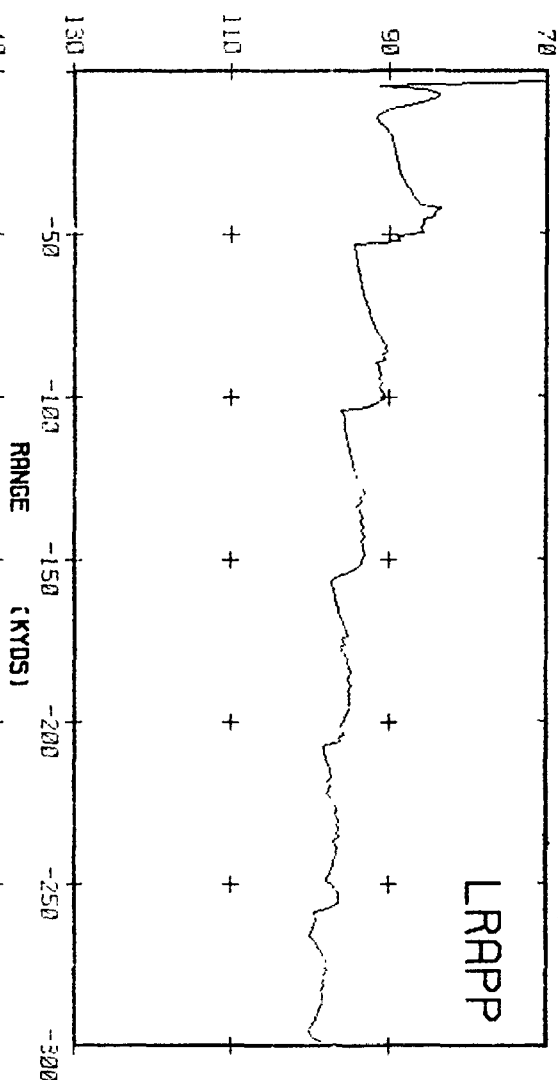
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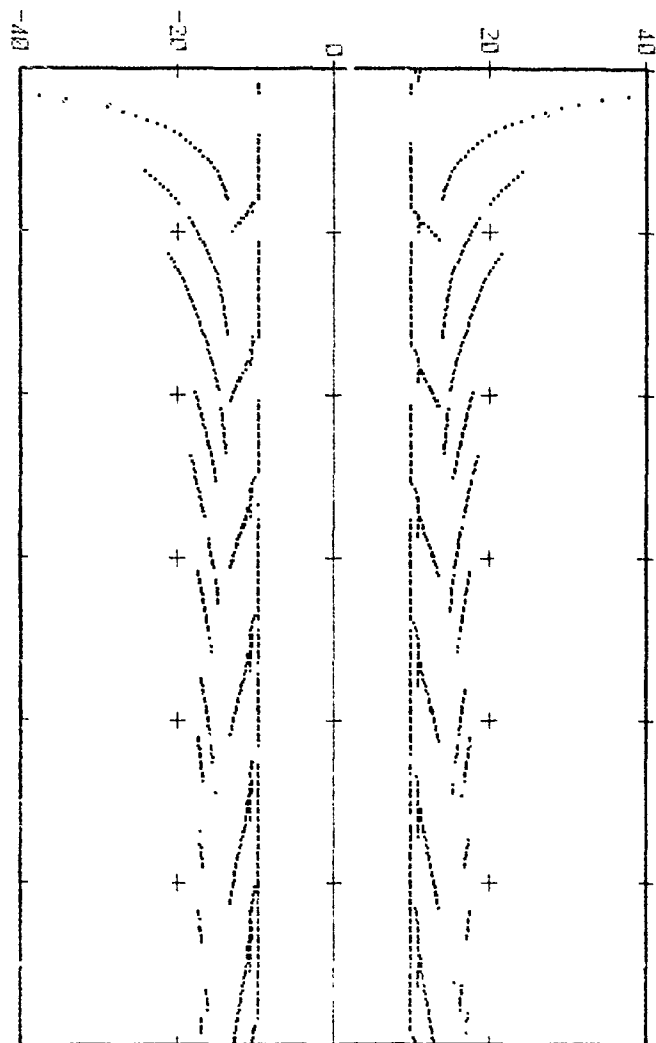
AREA 38 SUMMER

S 50 R 600 F 10

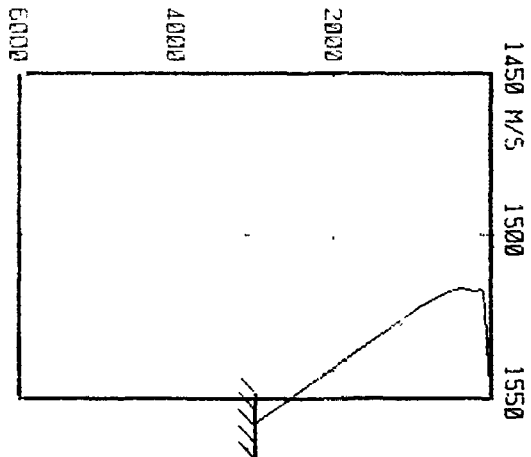
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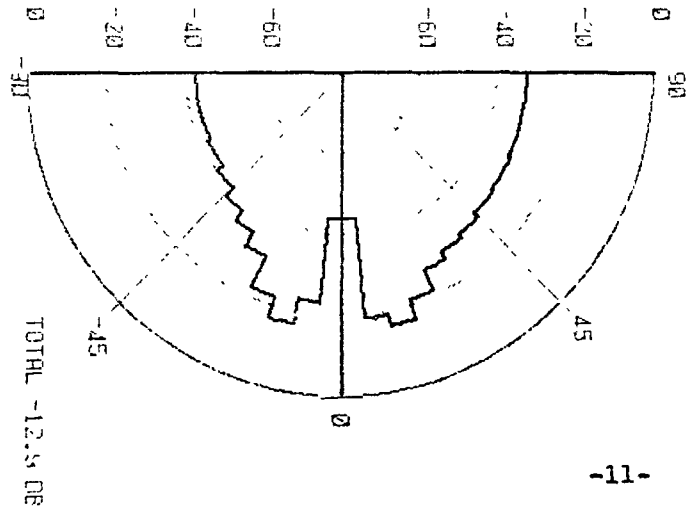
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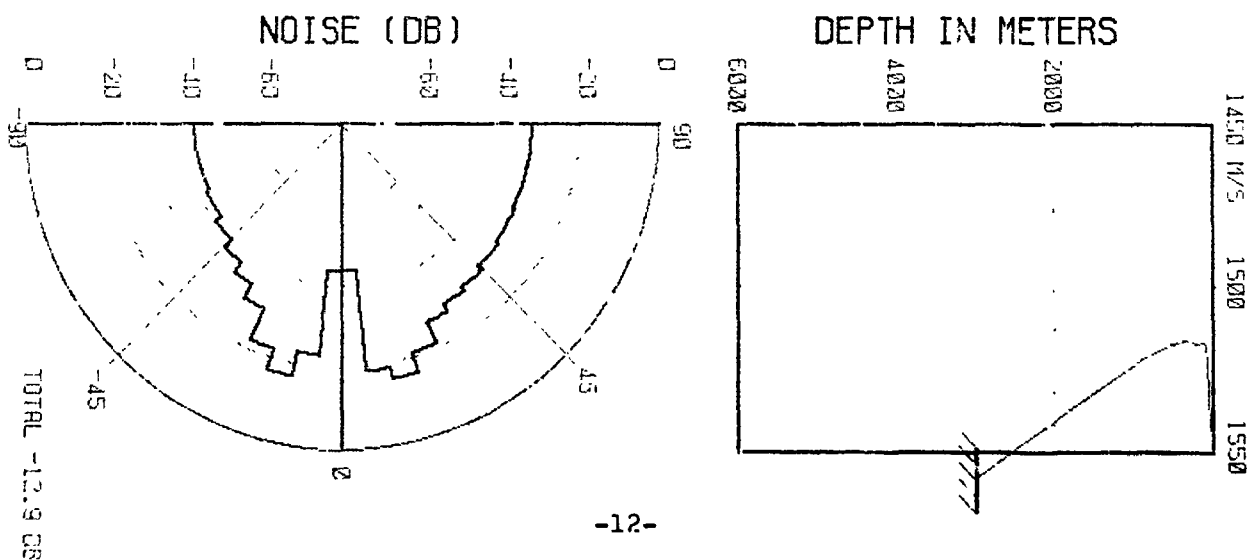
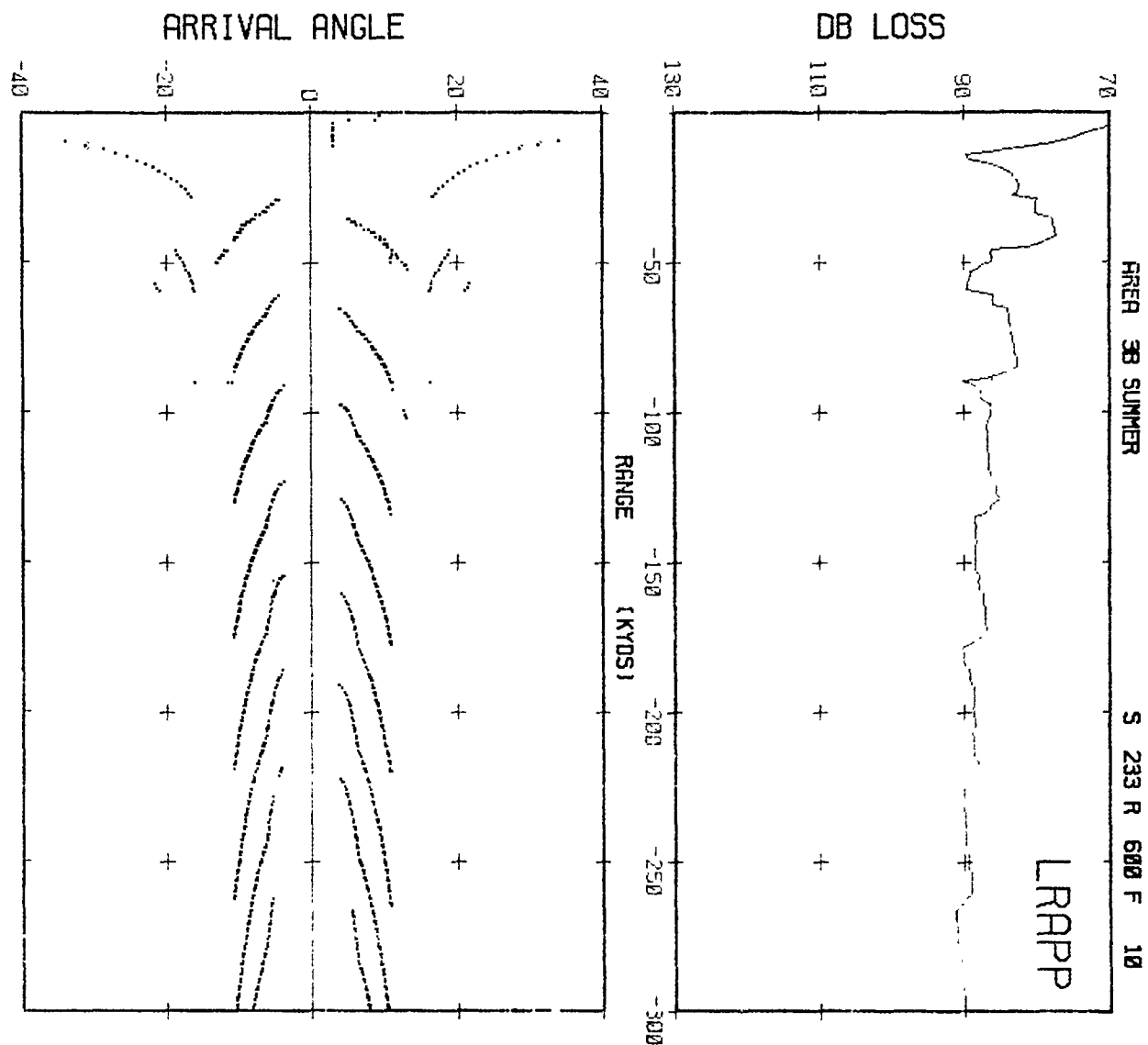


DEPTH IN METERS



NOISE (DB)



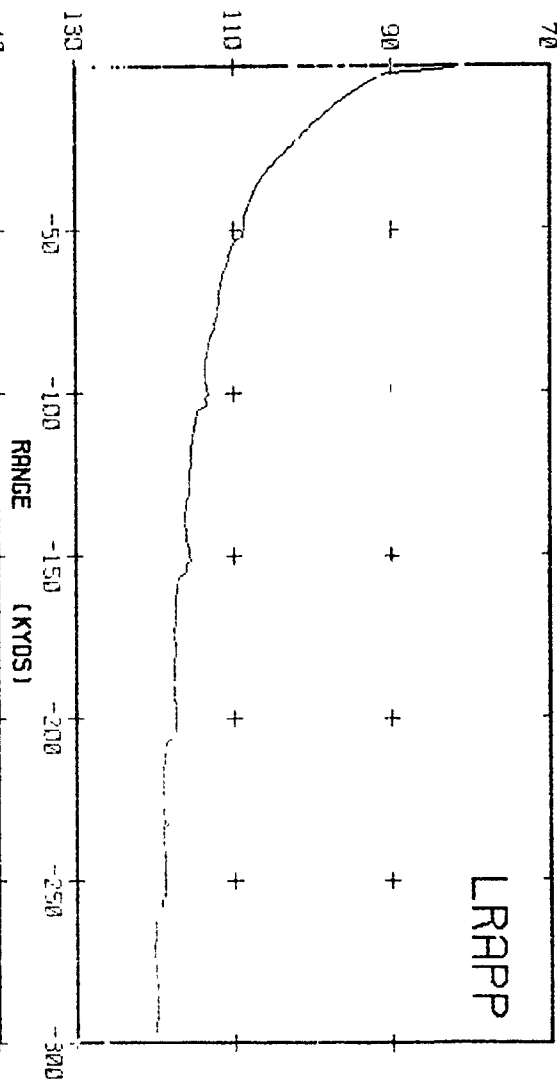


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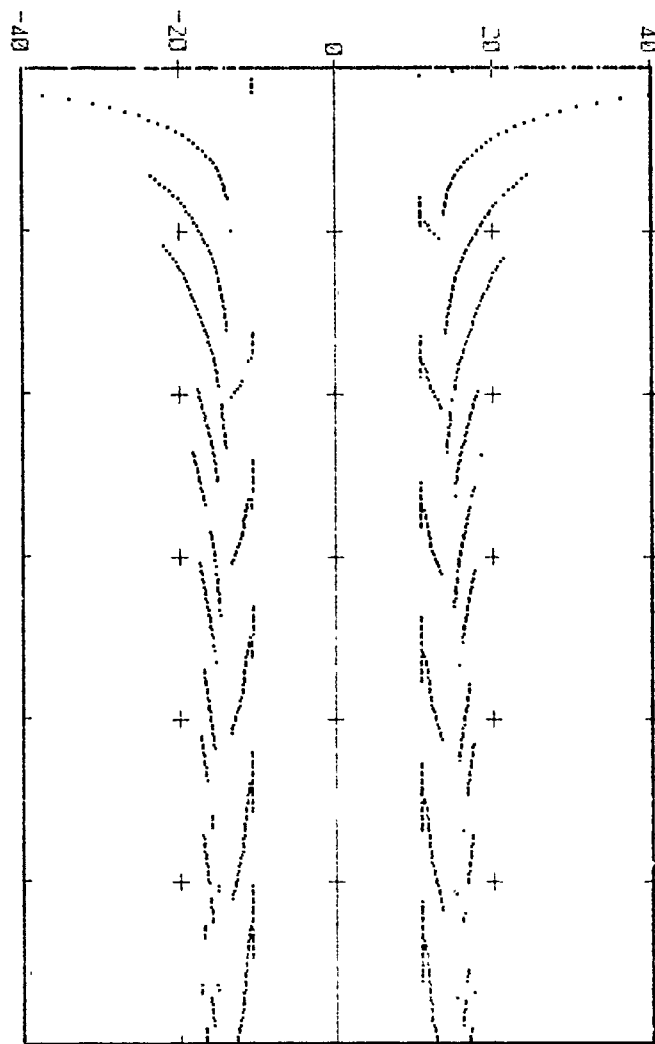
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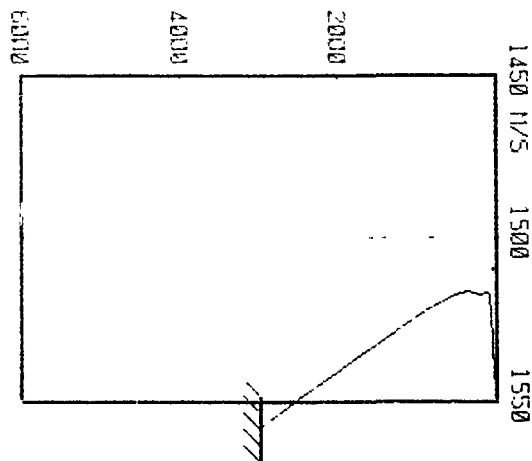
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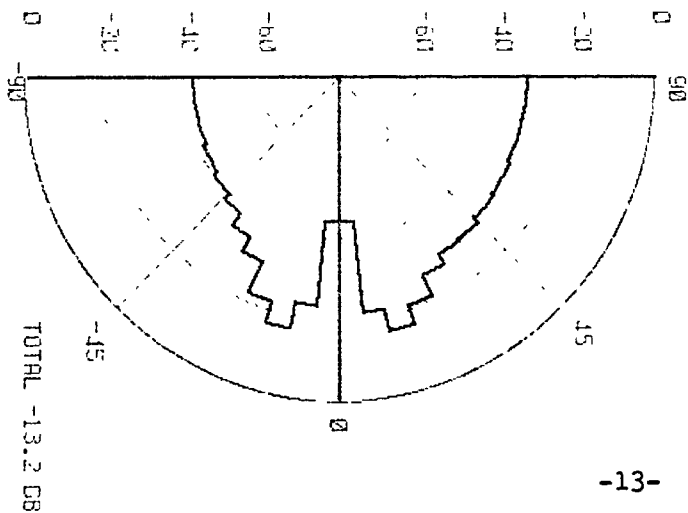
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

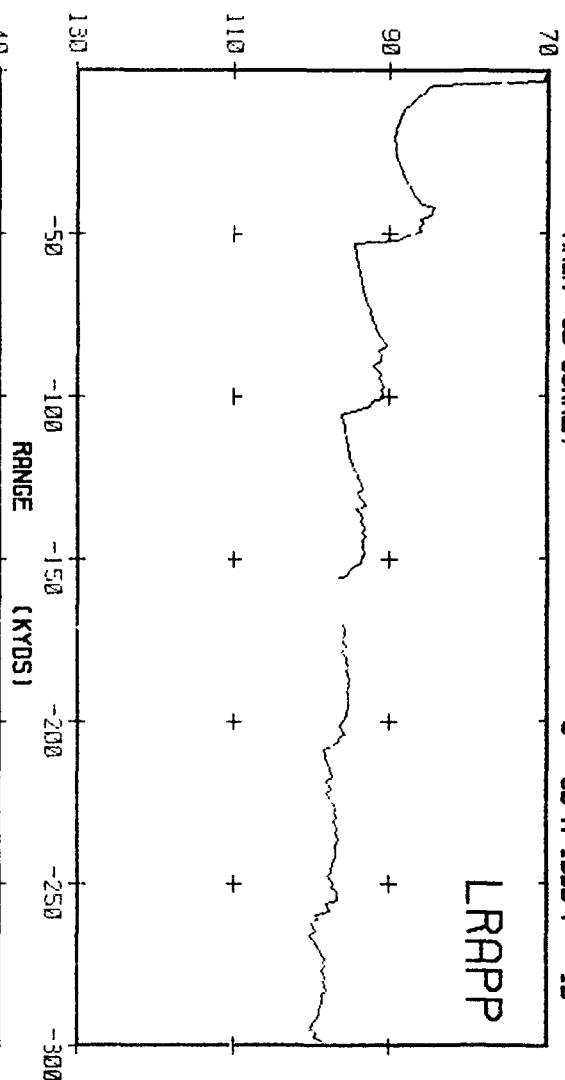


ARRER 38 SUMMER

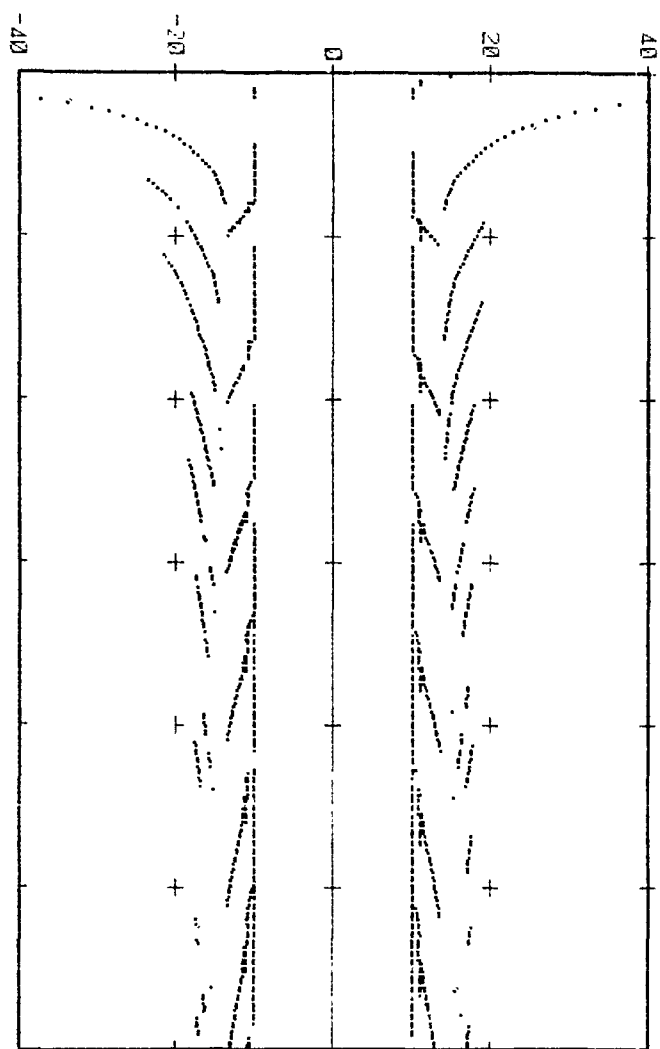
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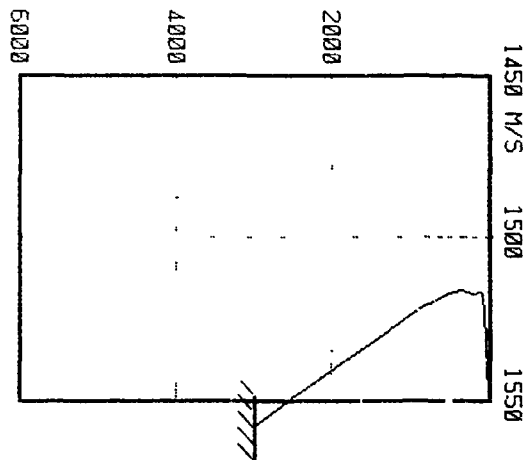
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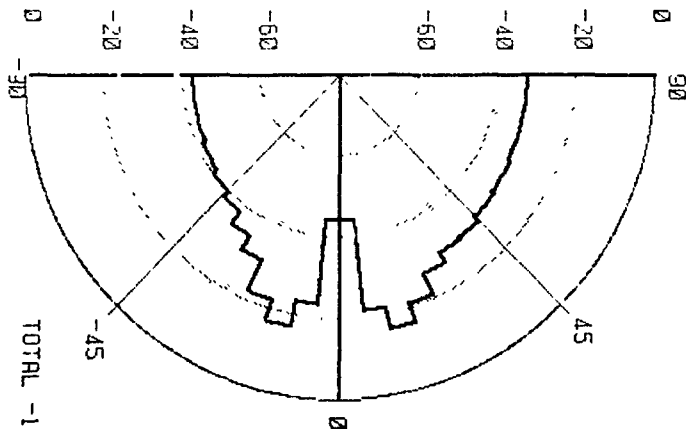
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



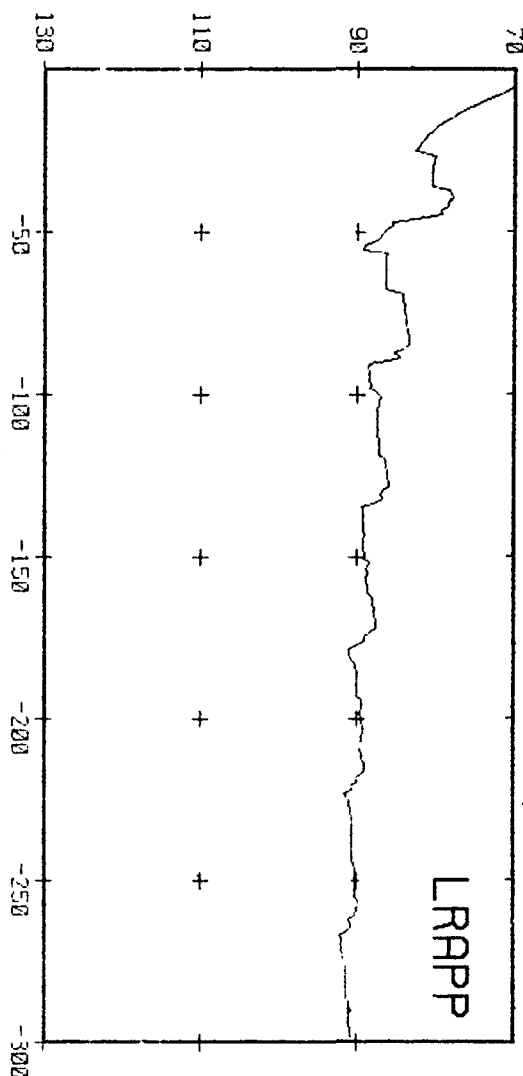
TOTAL -13.2 DB

AREA 38 SUMMER

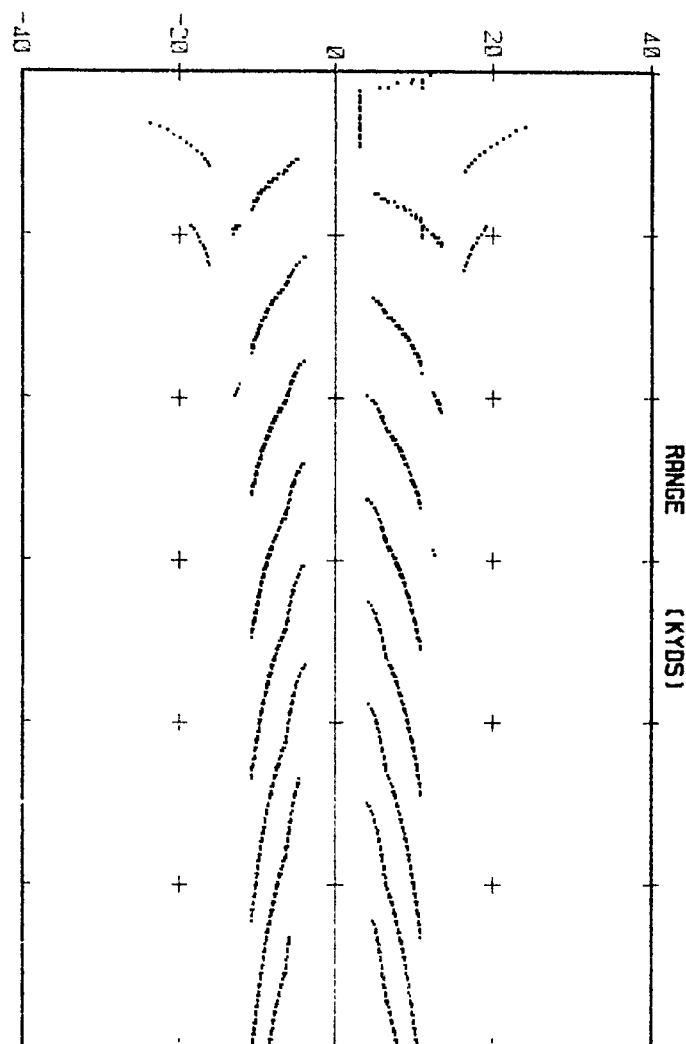
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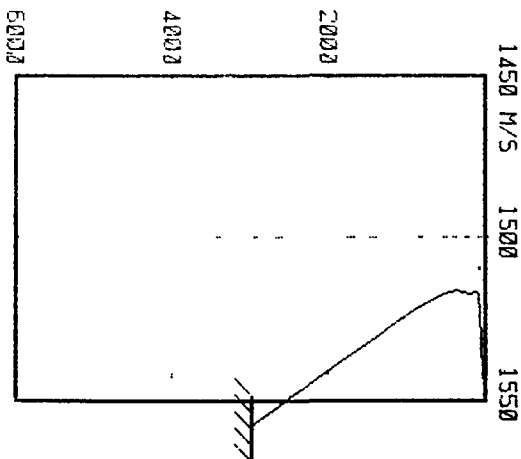
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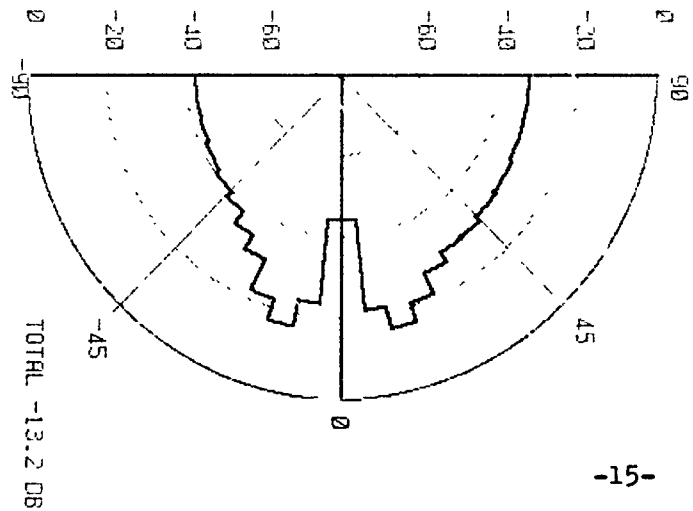
ARRIVAL ANGLE



DEPTH IN METERS

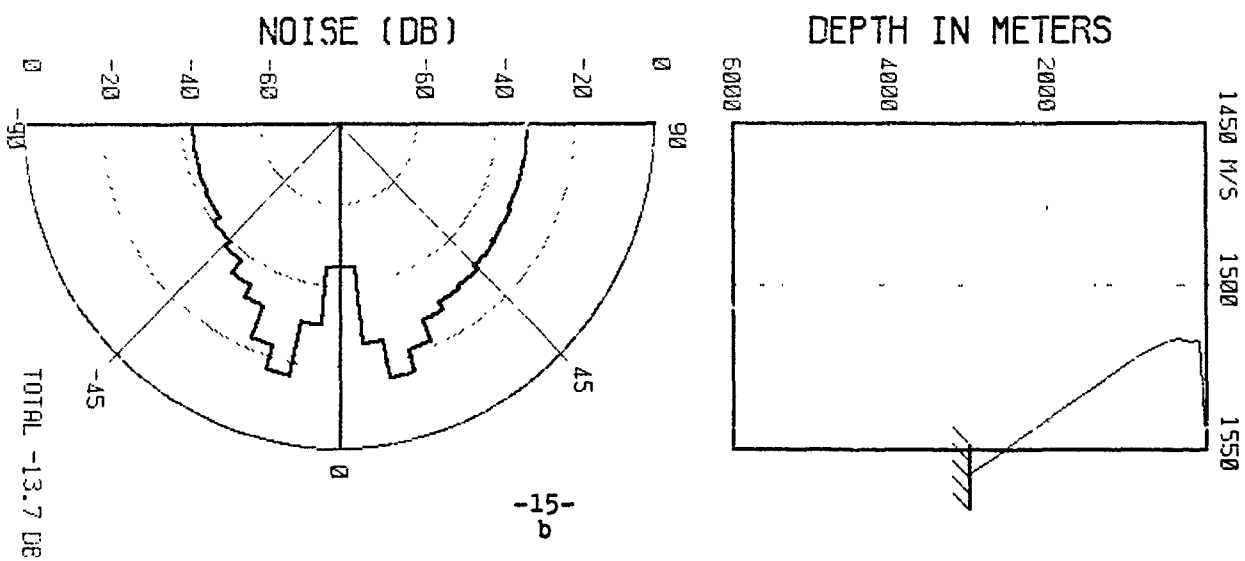
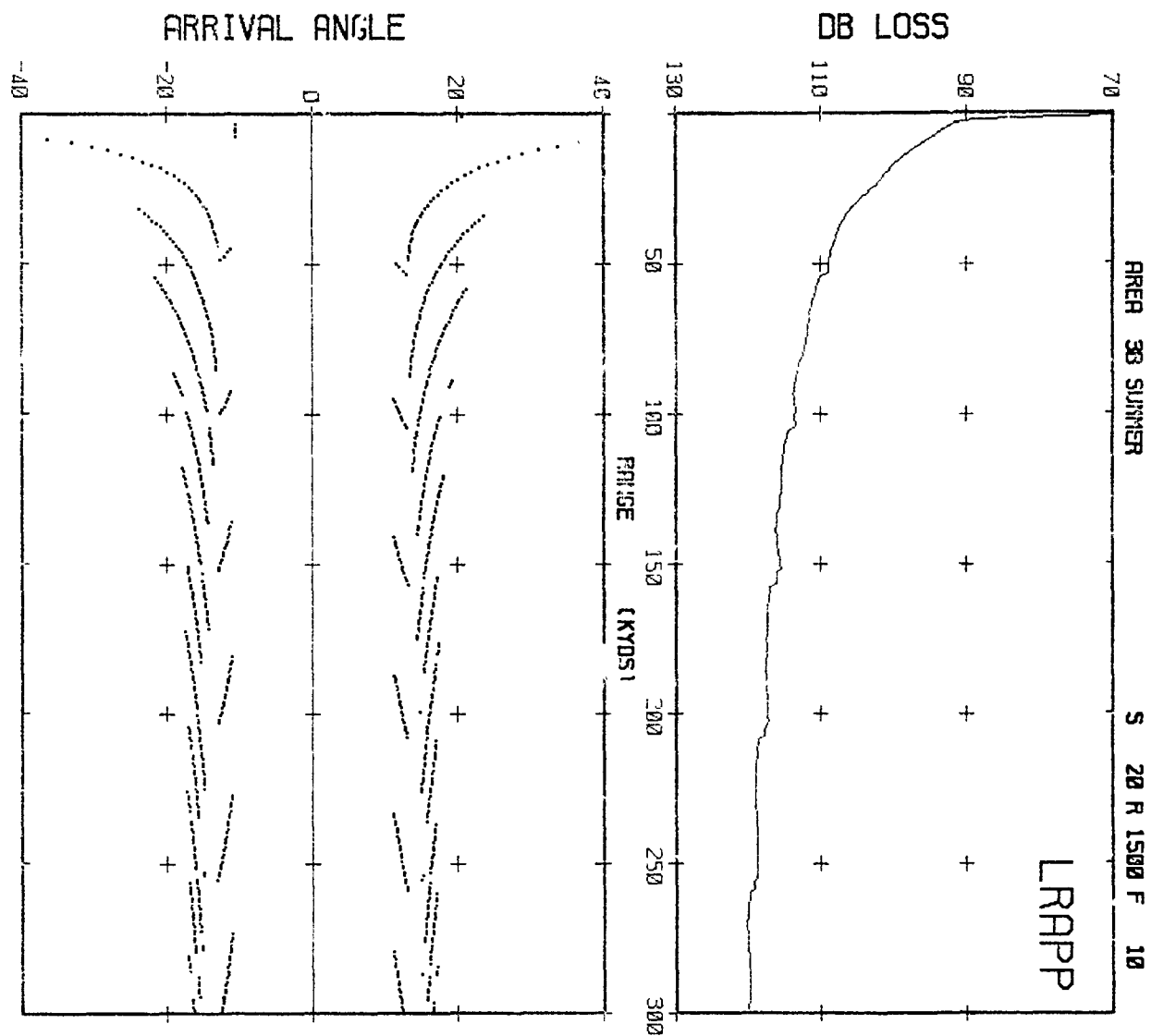


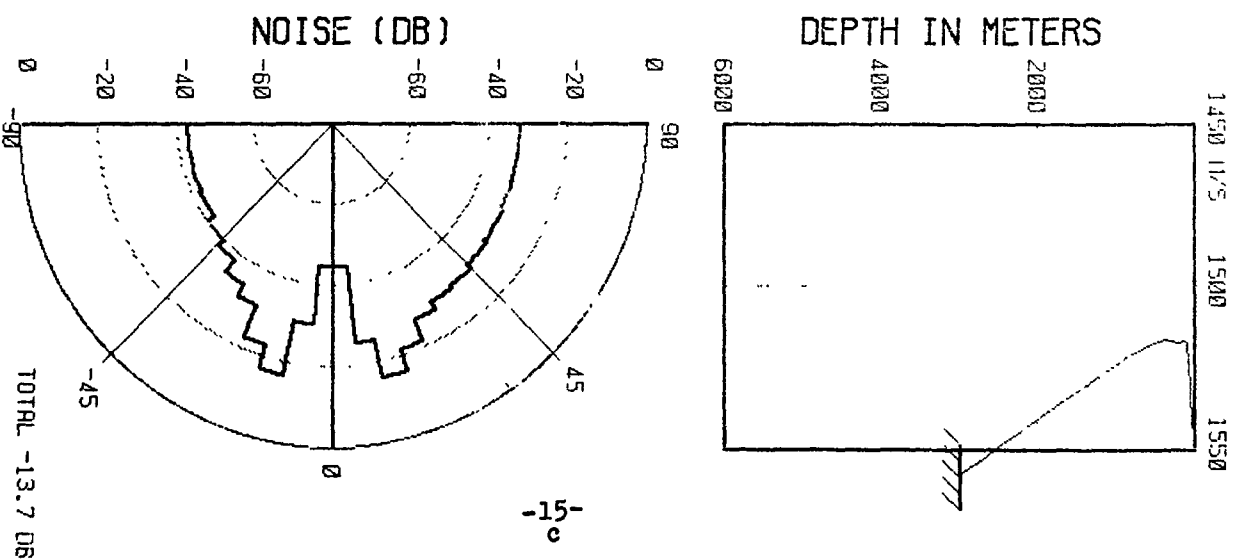
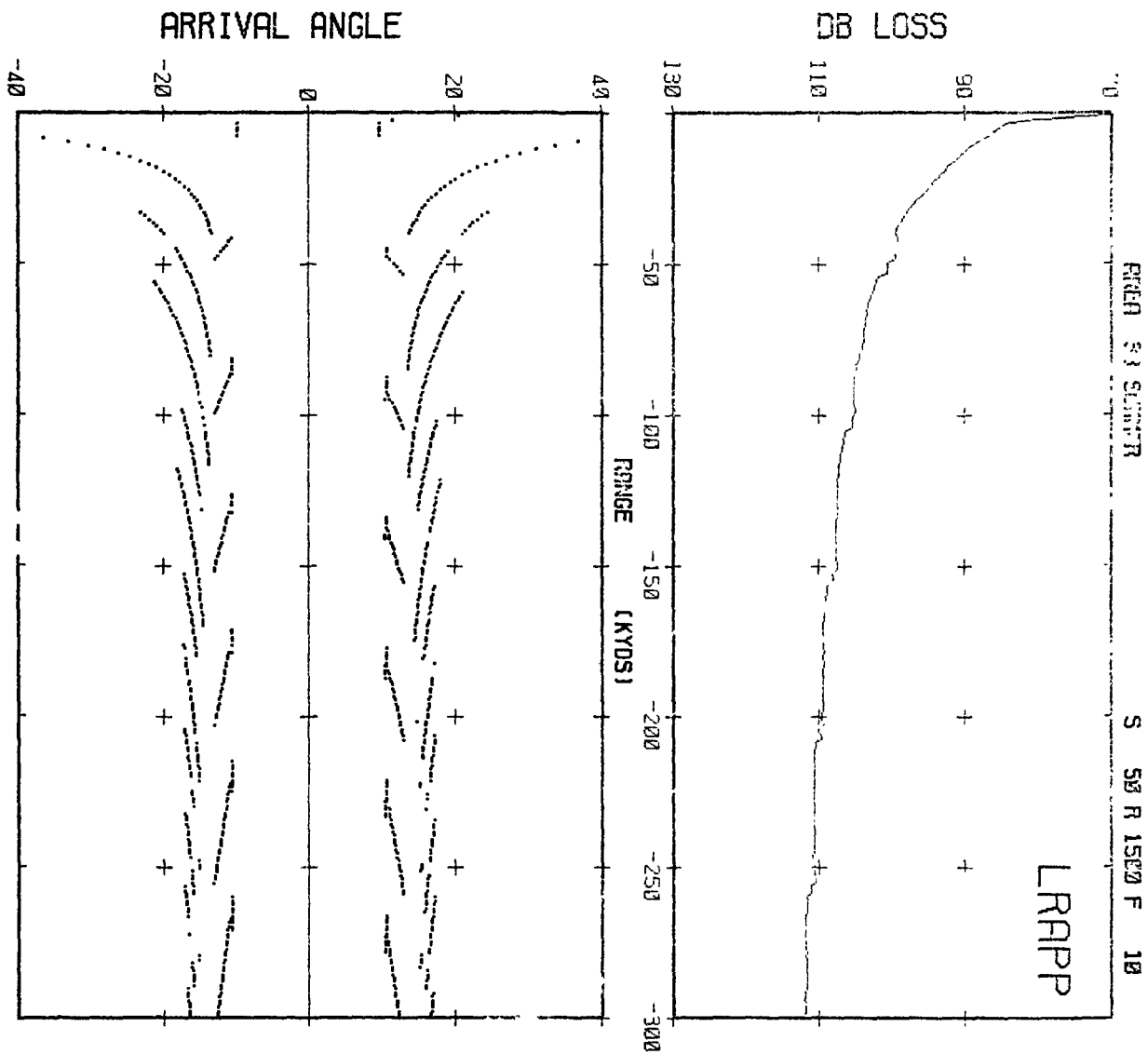
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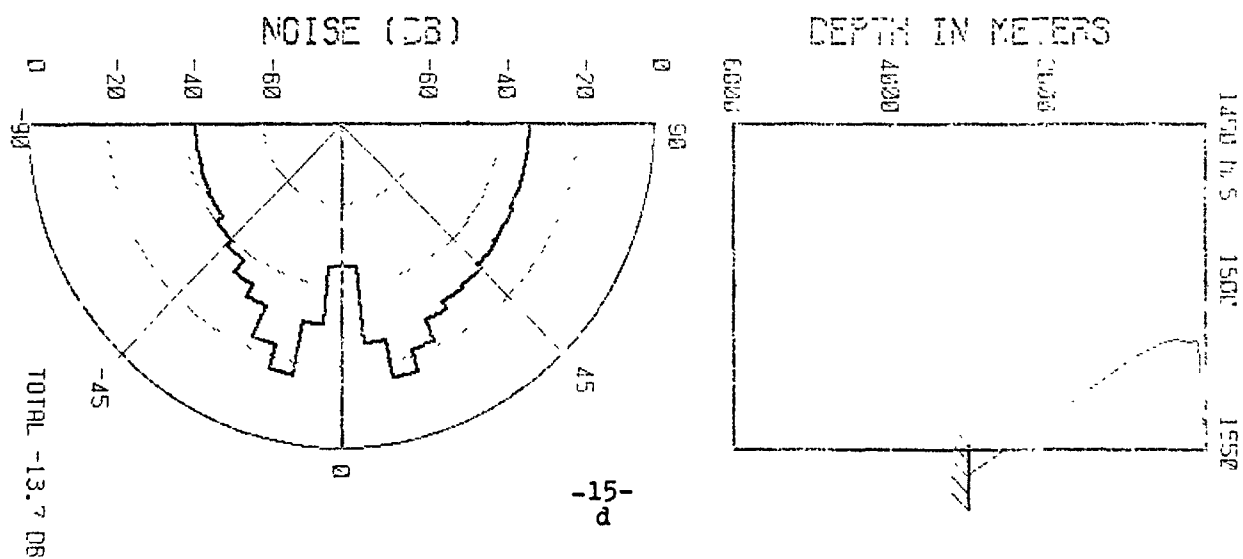
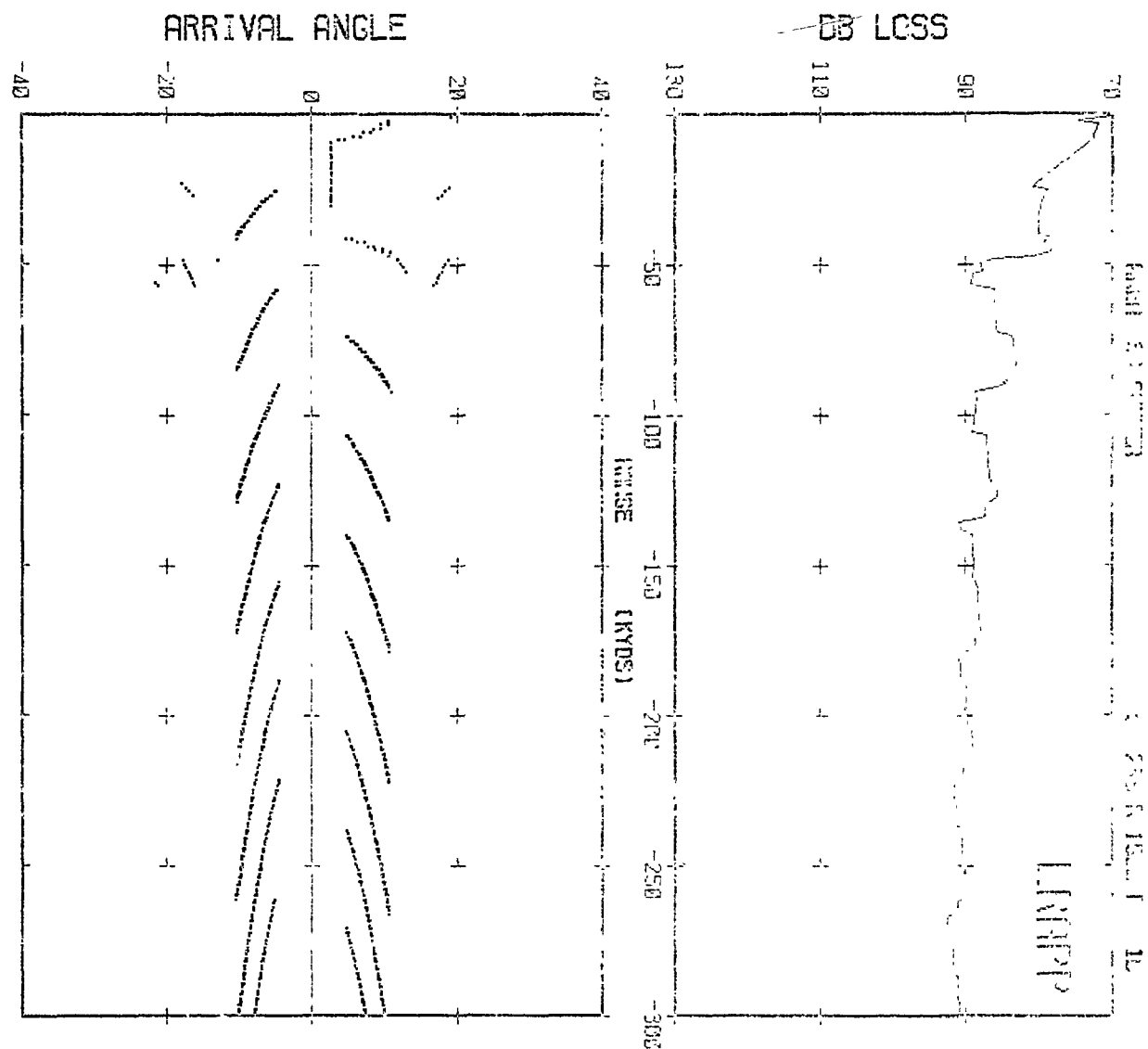


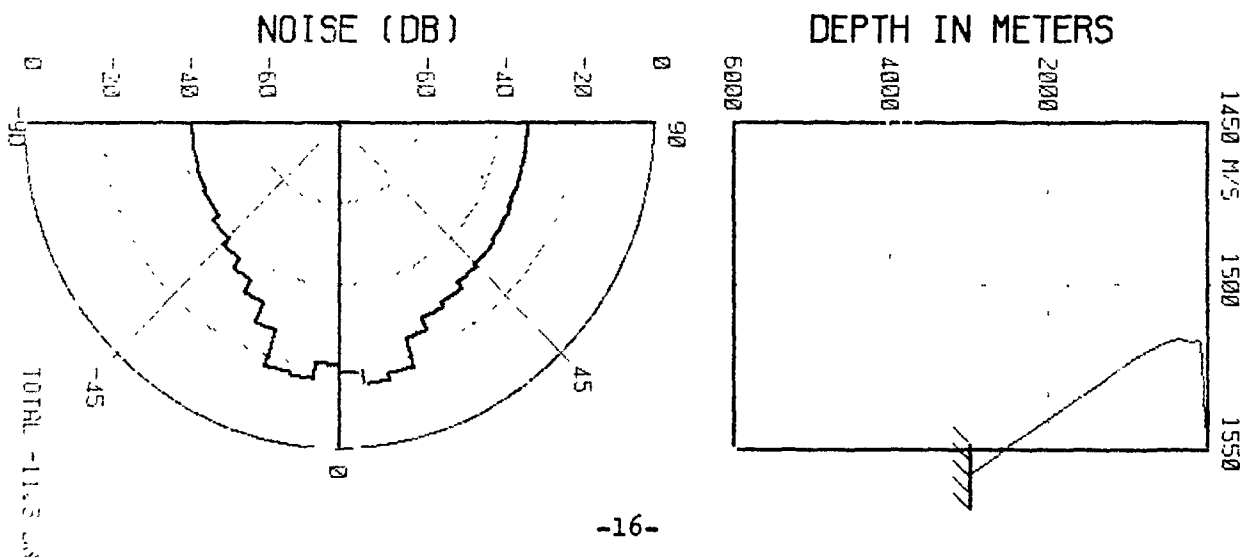
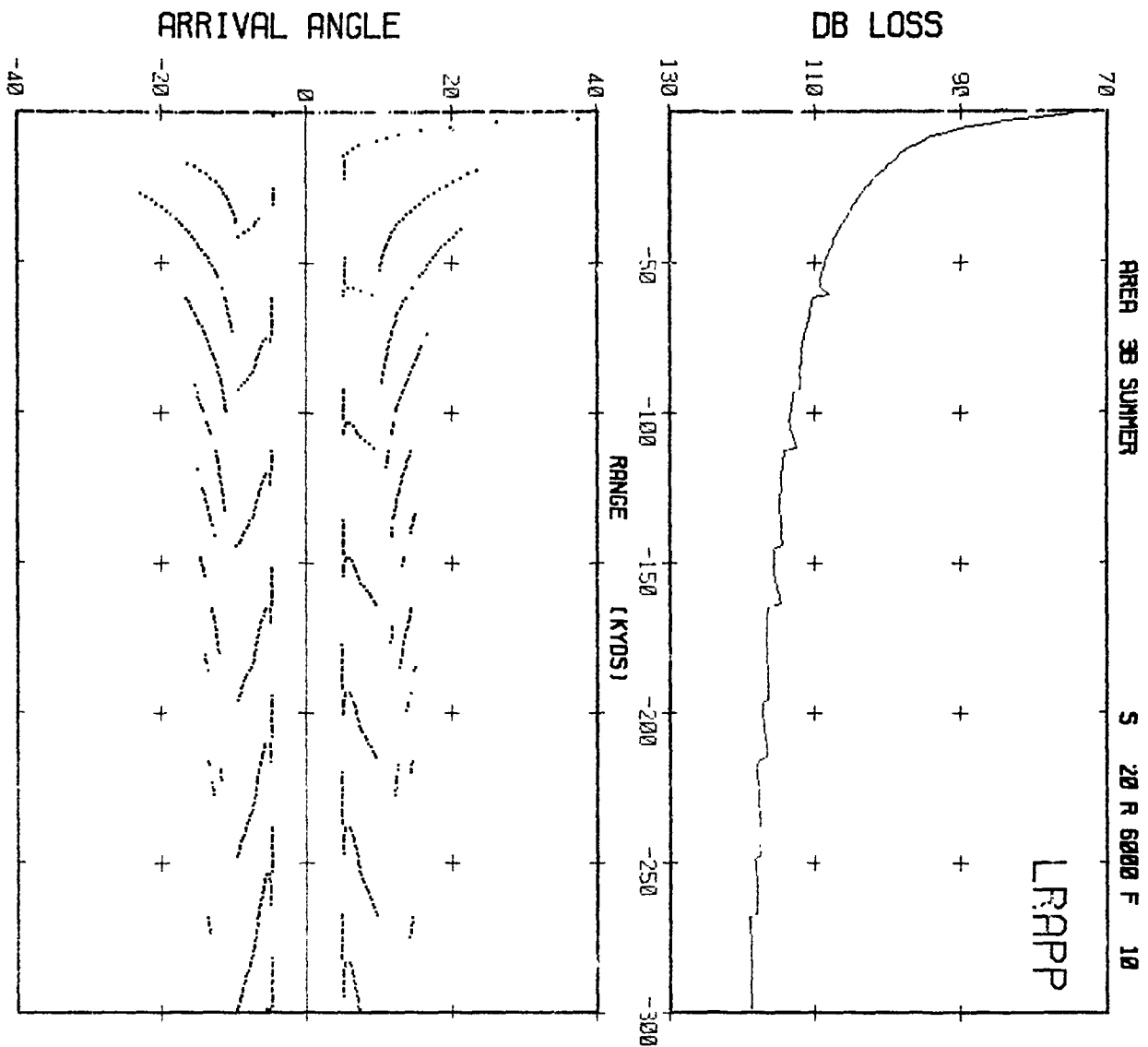


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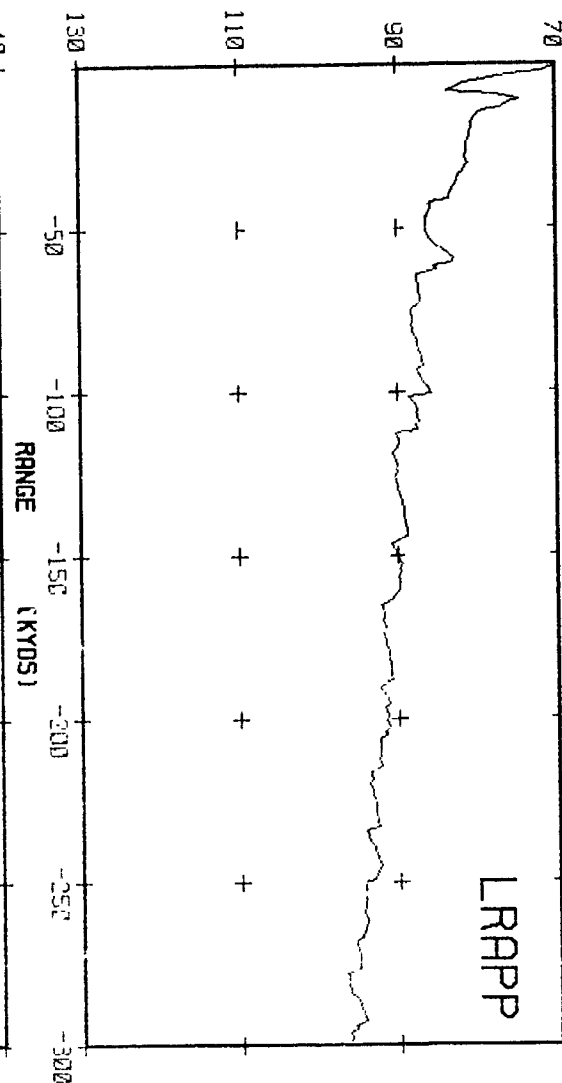


AREA 38 SUMMER

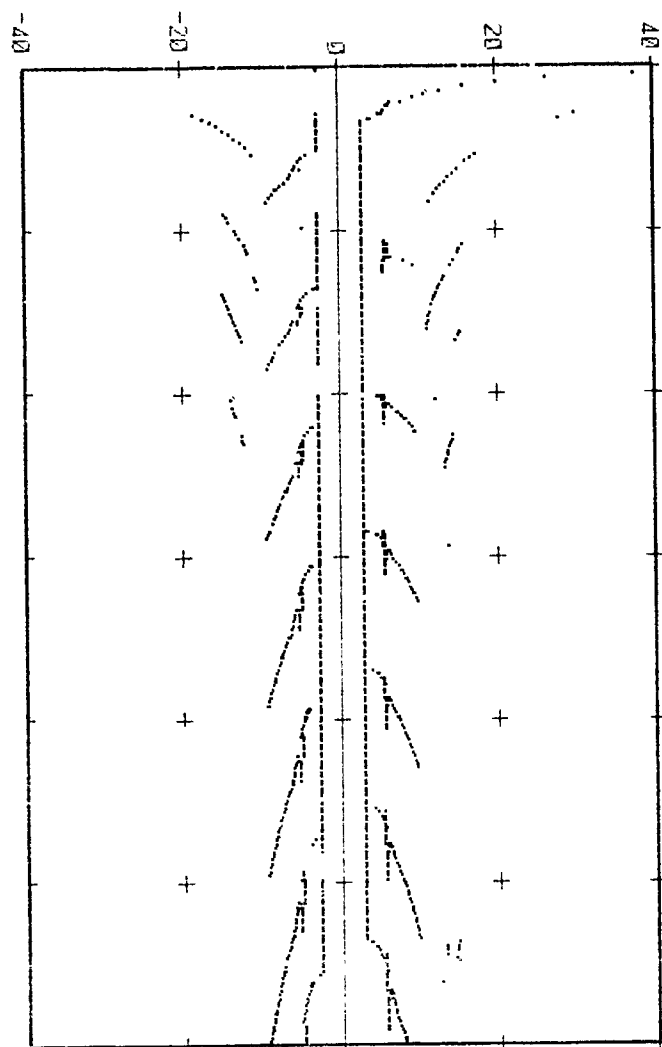
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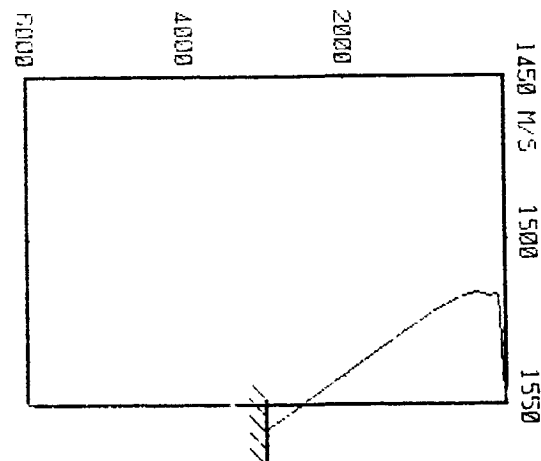
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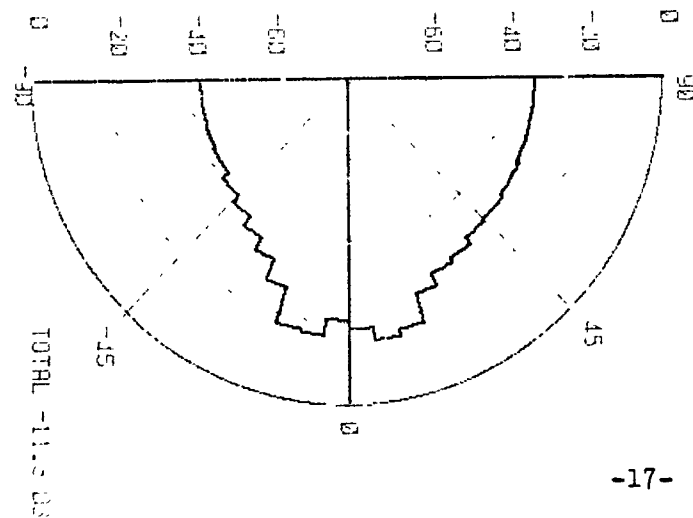
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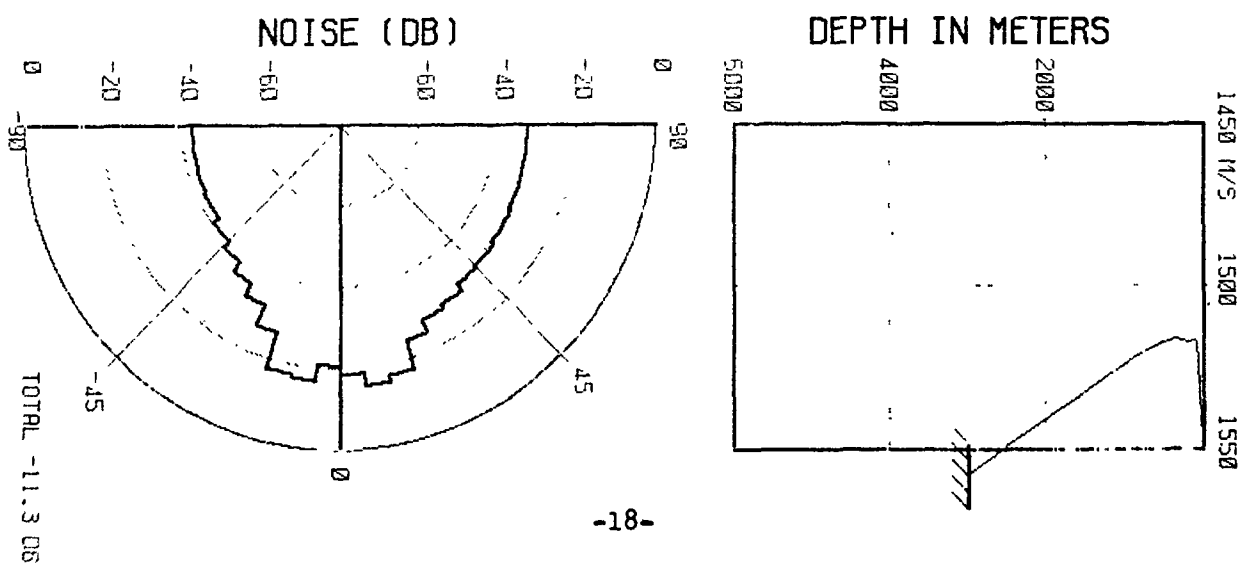
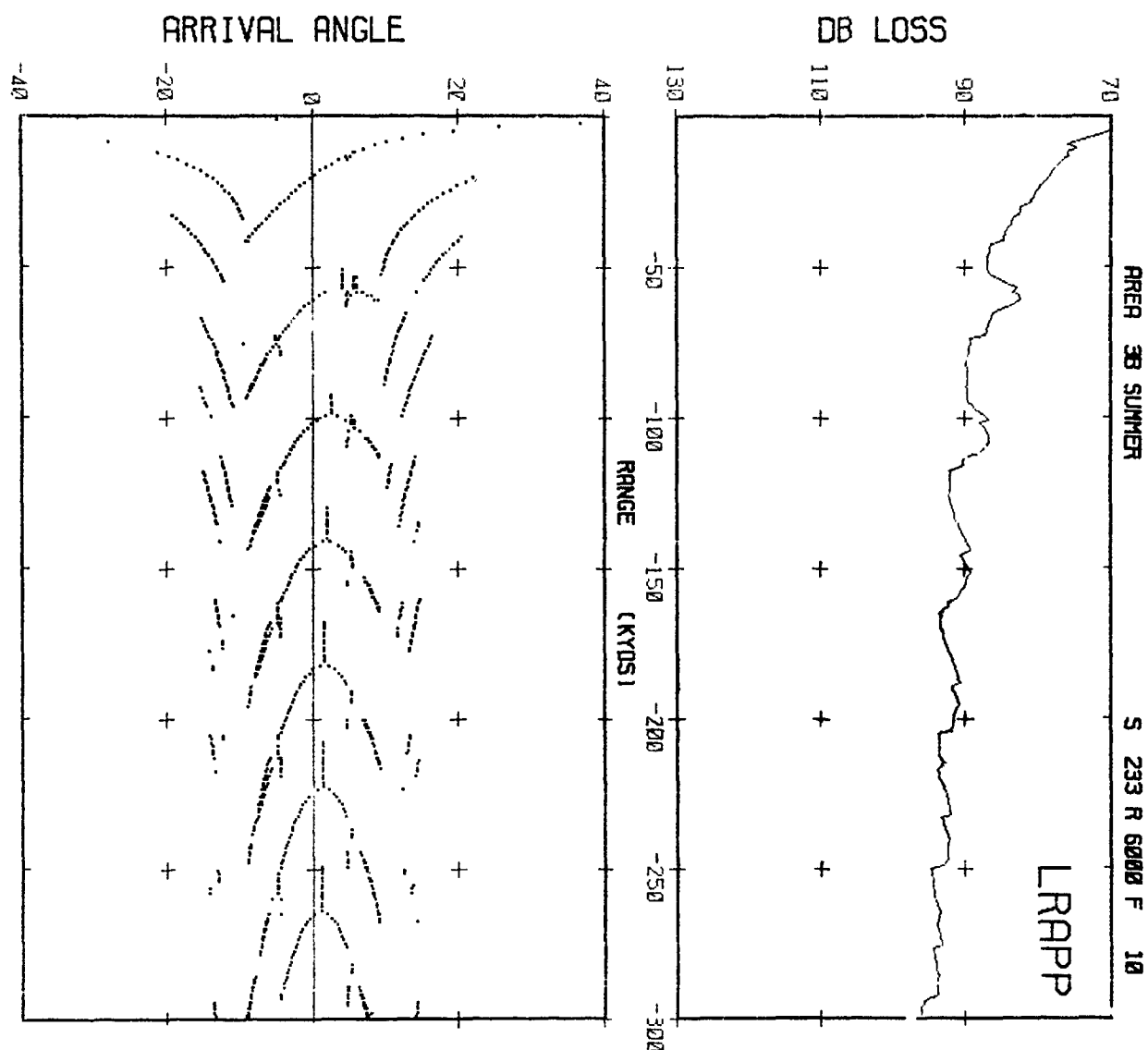


DEPTH IN METERS



NOISE (DB)





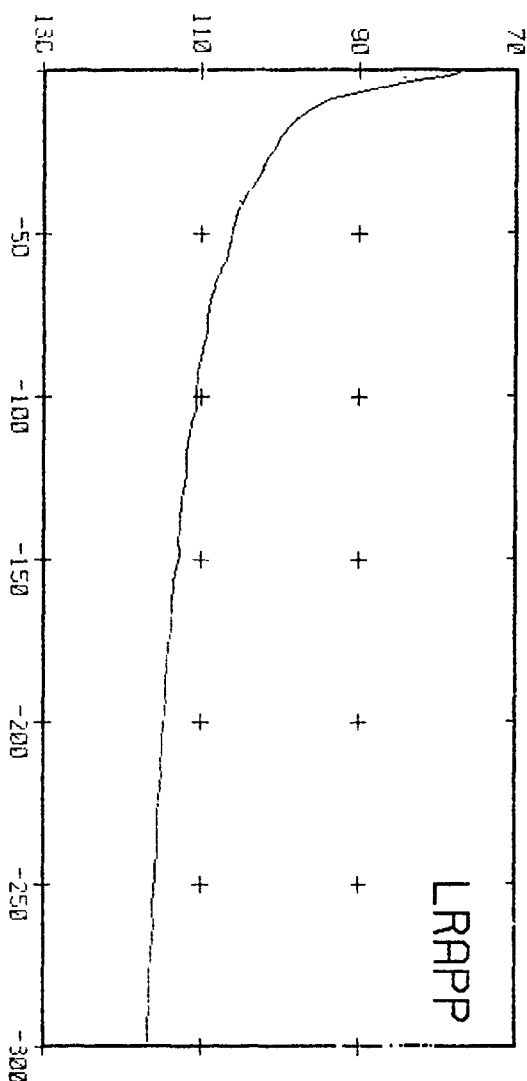
AREA 38 SUMMER

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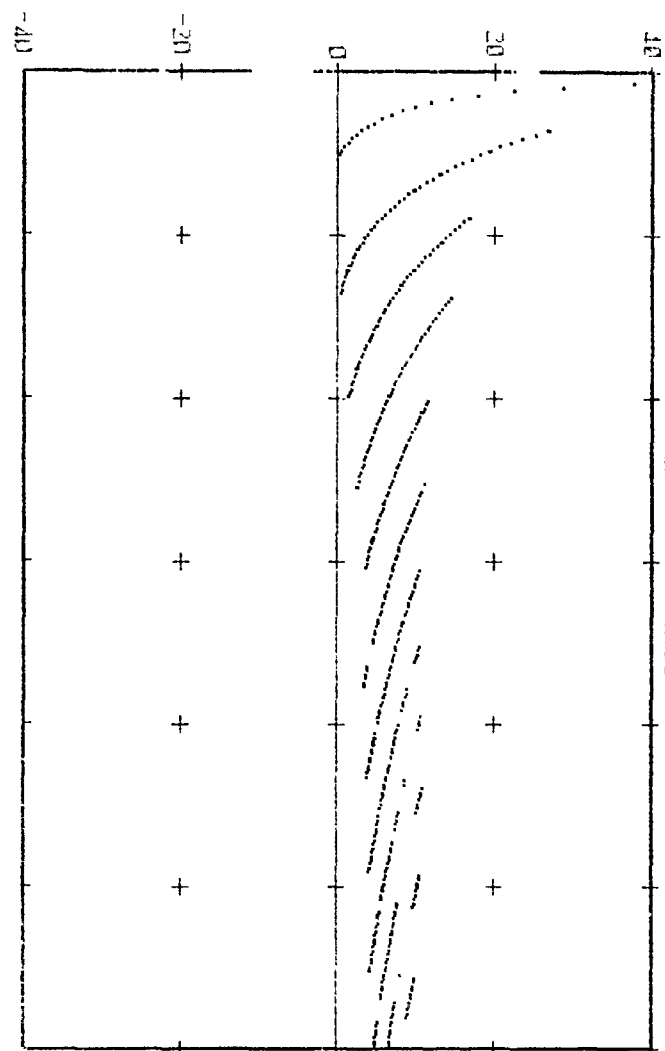
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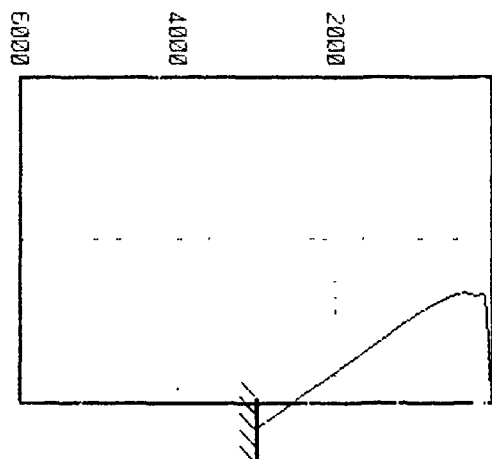
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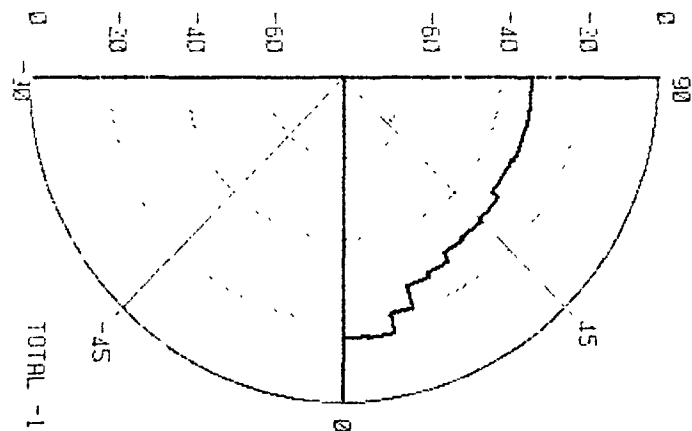
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



TOTAL -13.7 GS

AREA 38 SUMMER

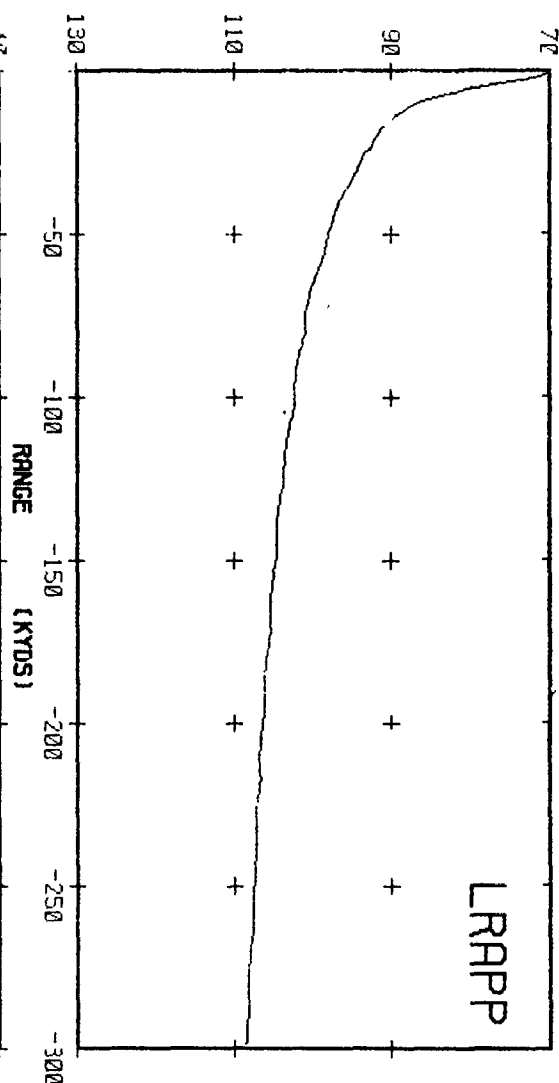
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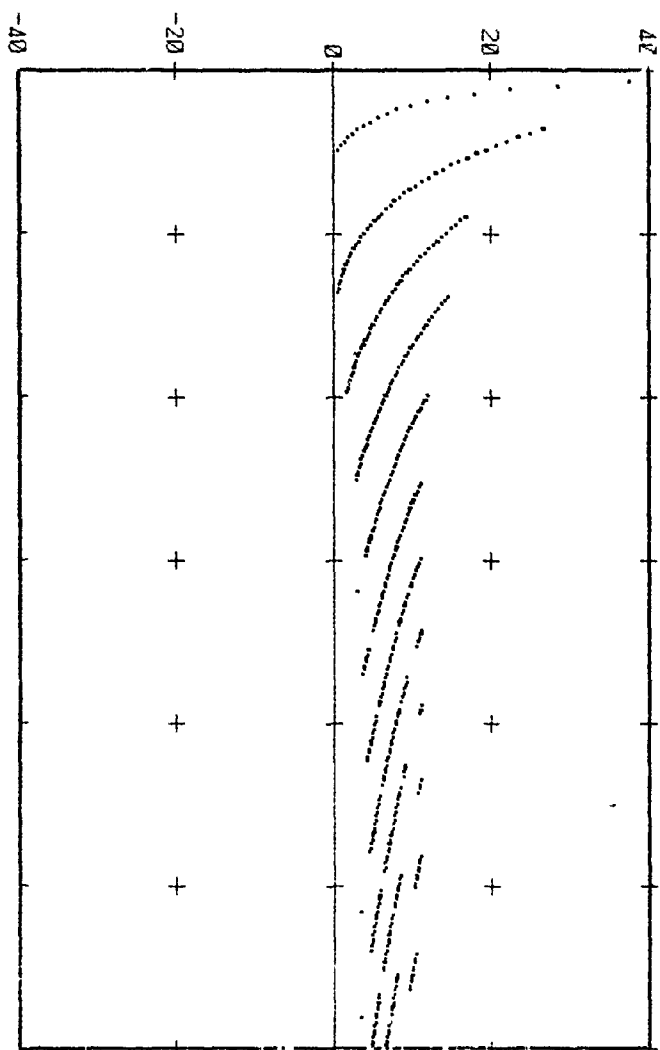
1500

1550

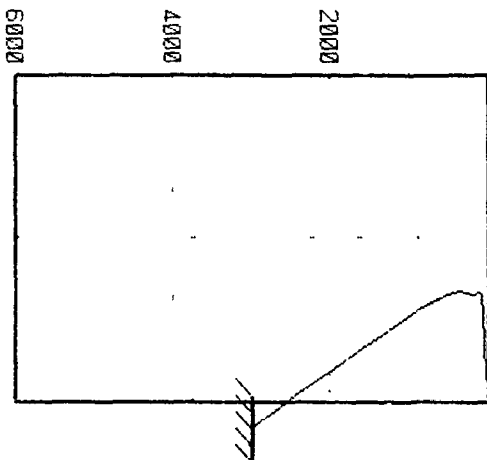
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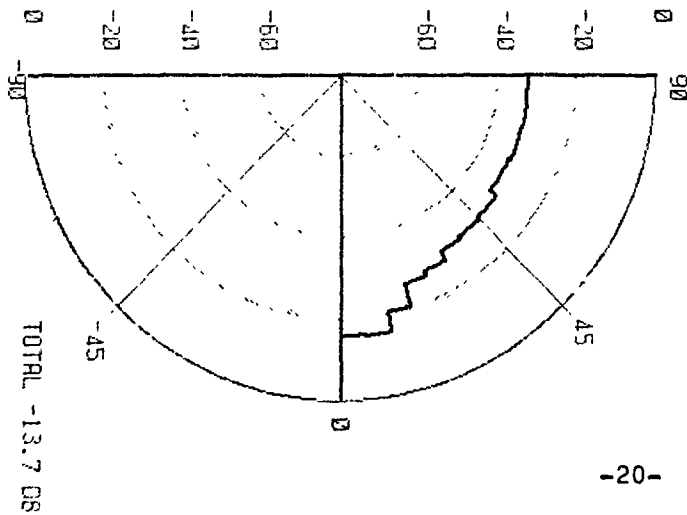
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



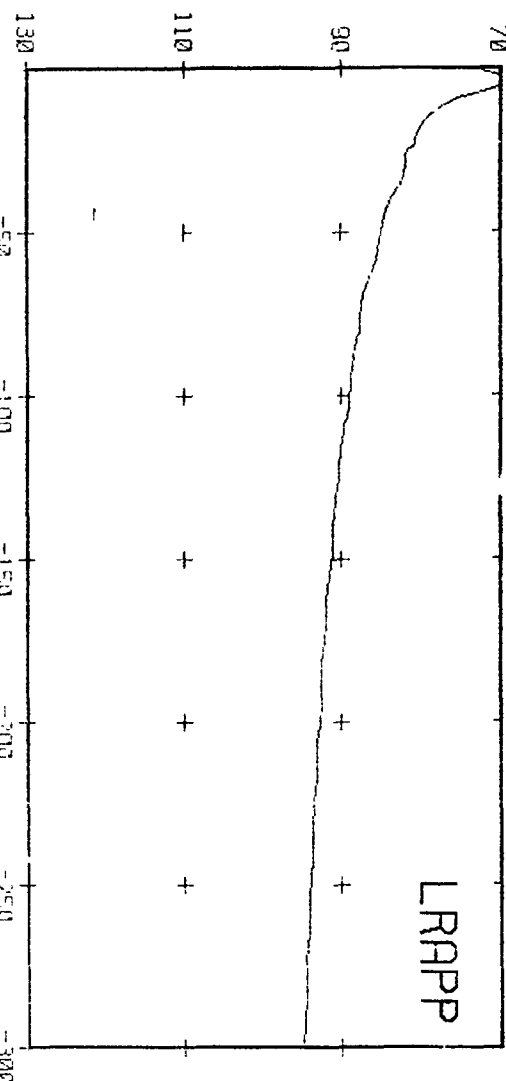


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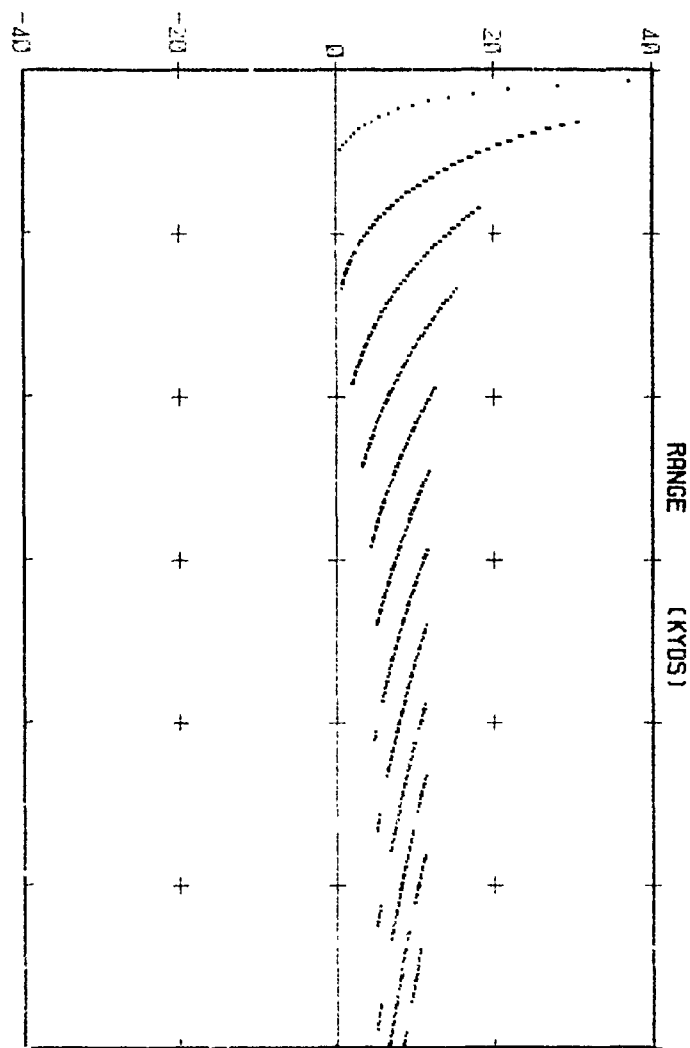
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LRAPP

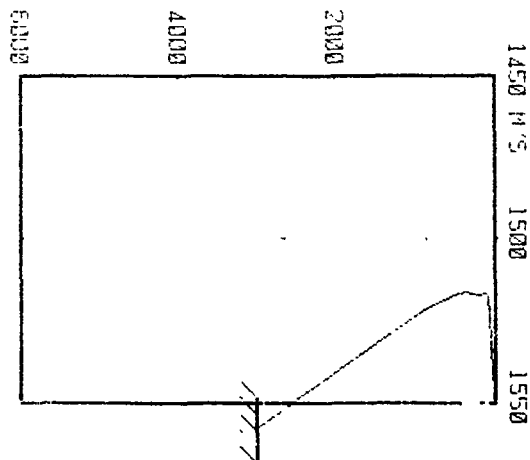
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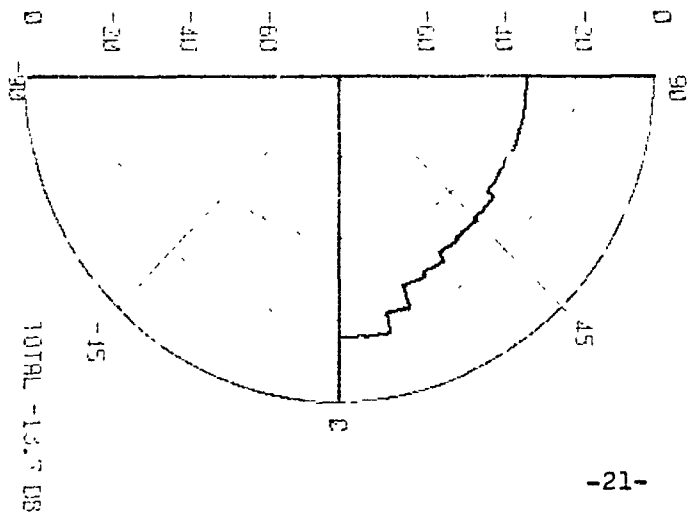
ARRIVAL ANGLE

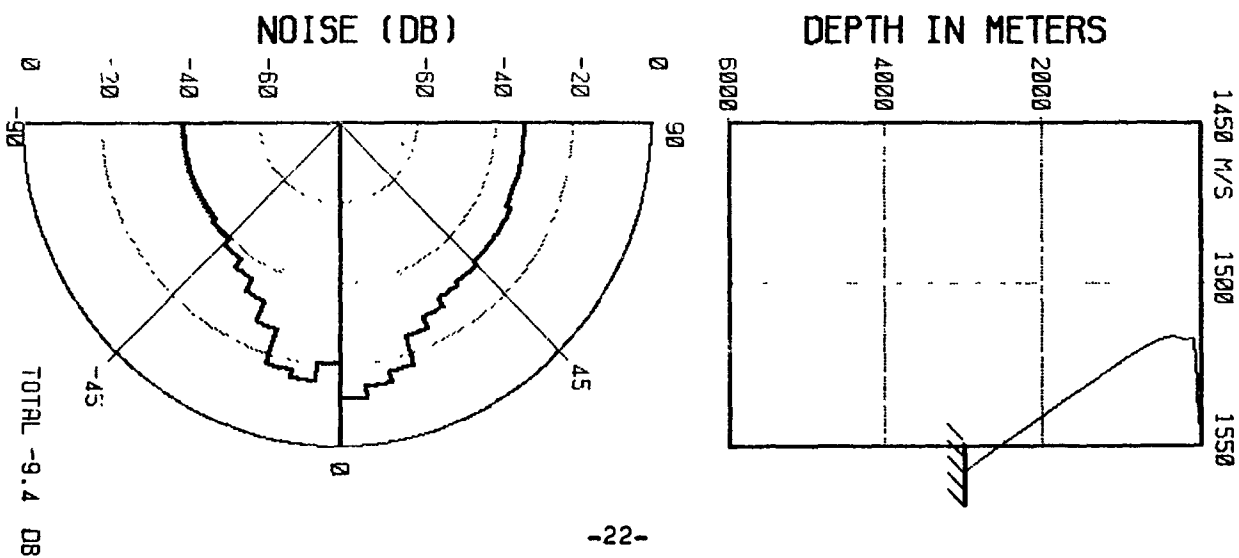
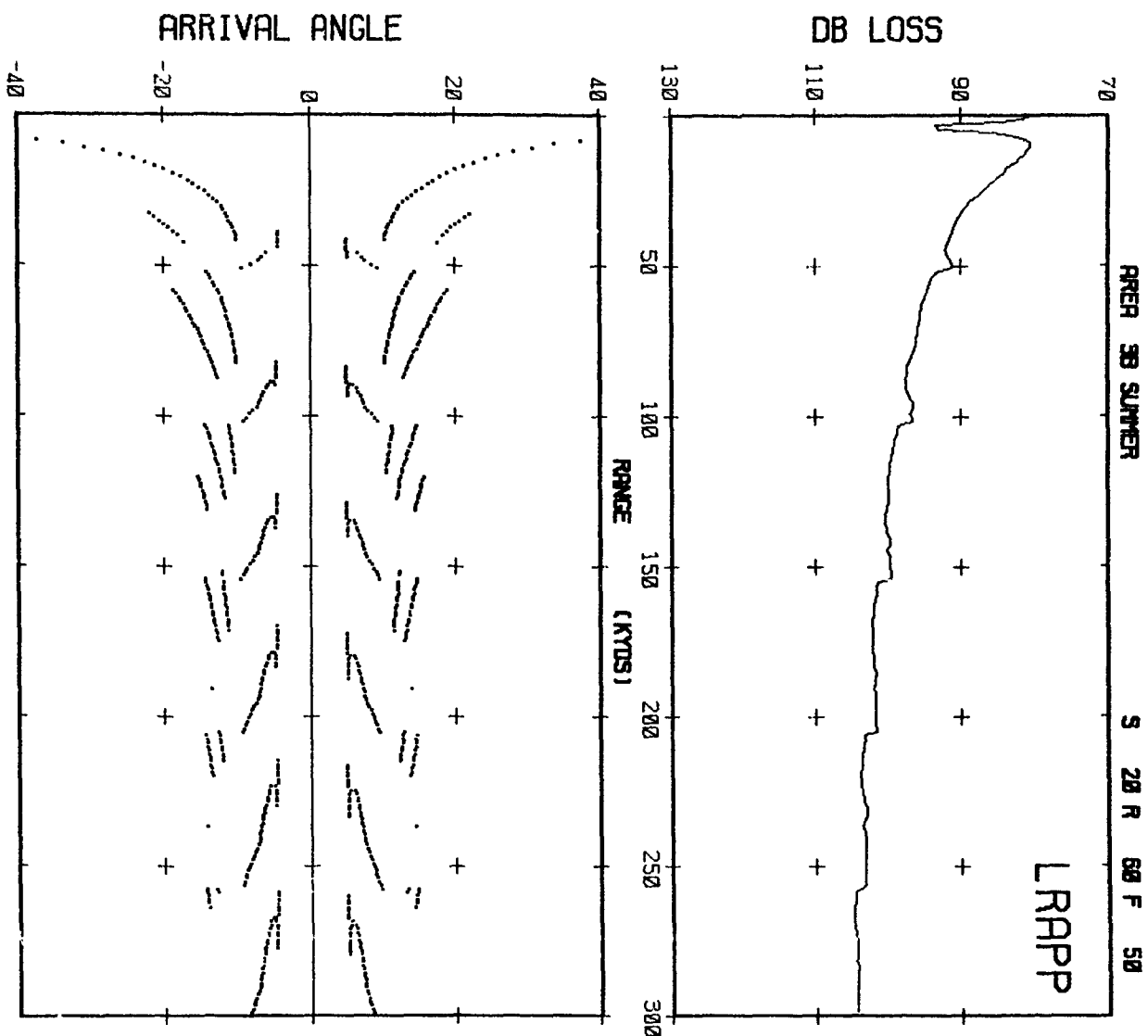


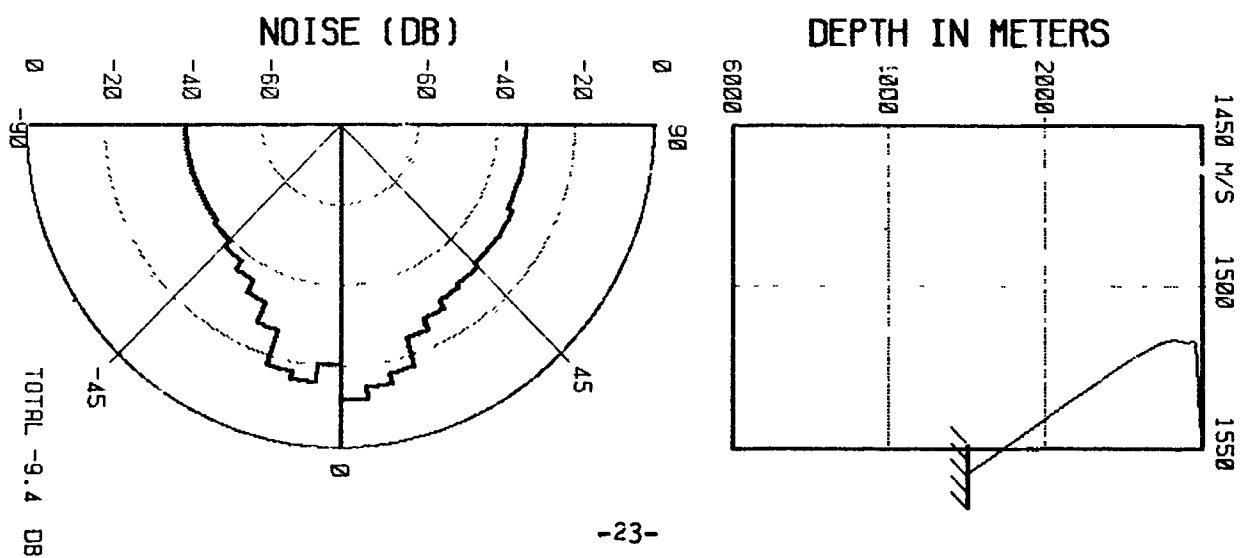
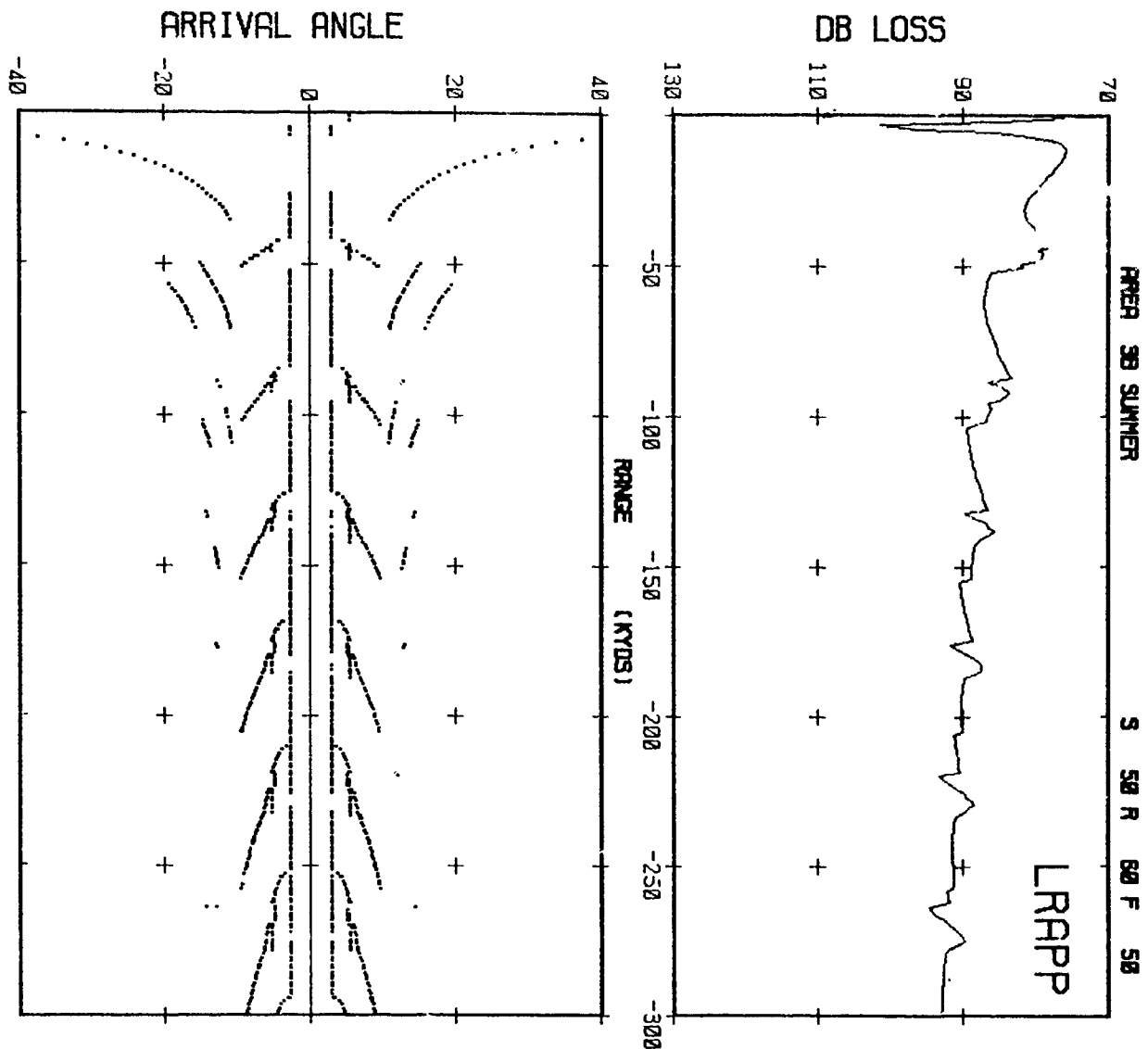
DEPTH IN METERS

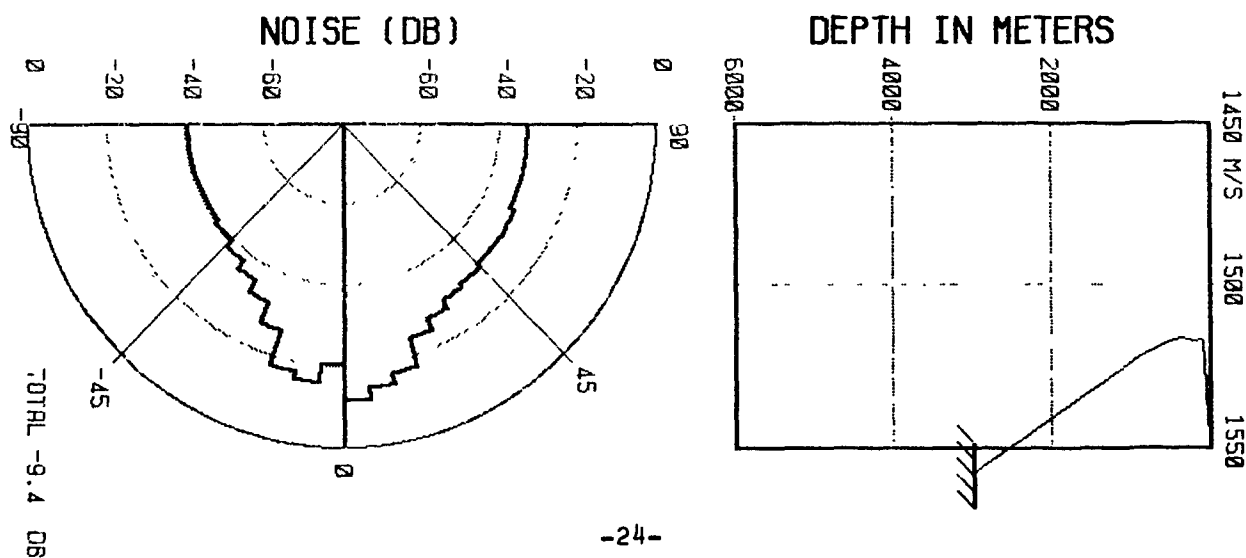
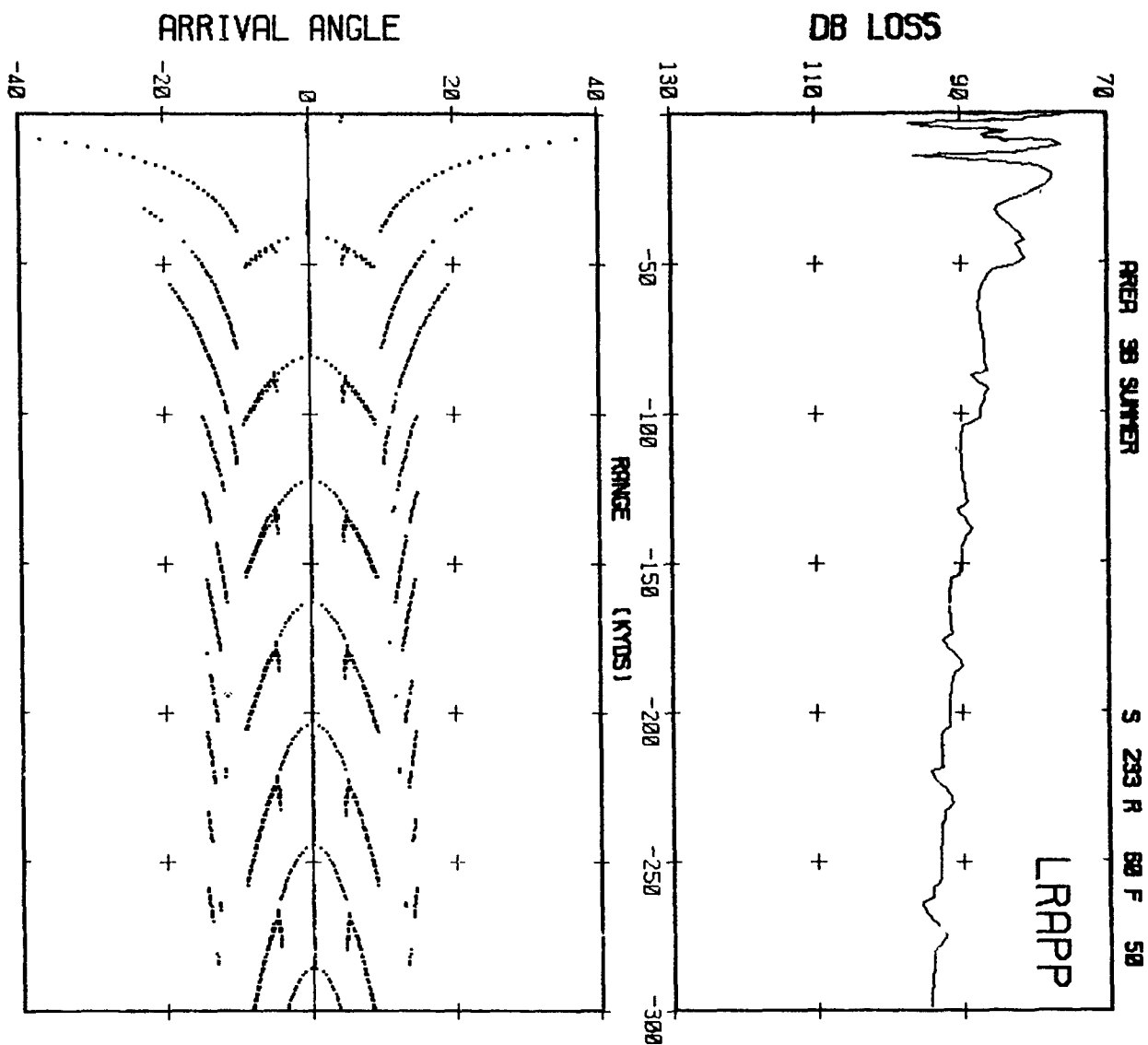


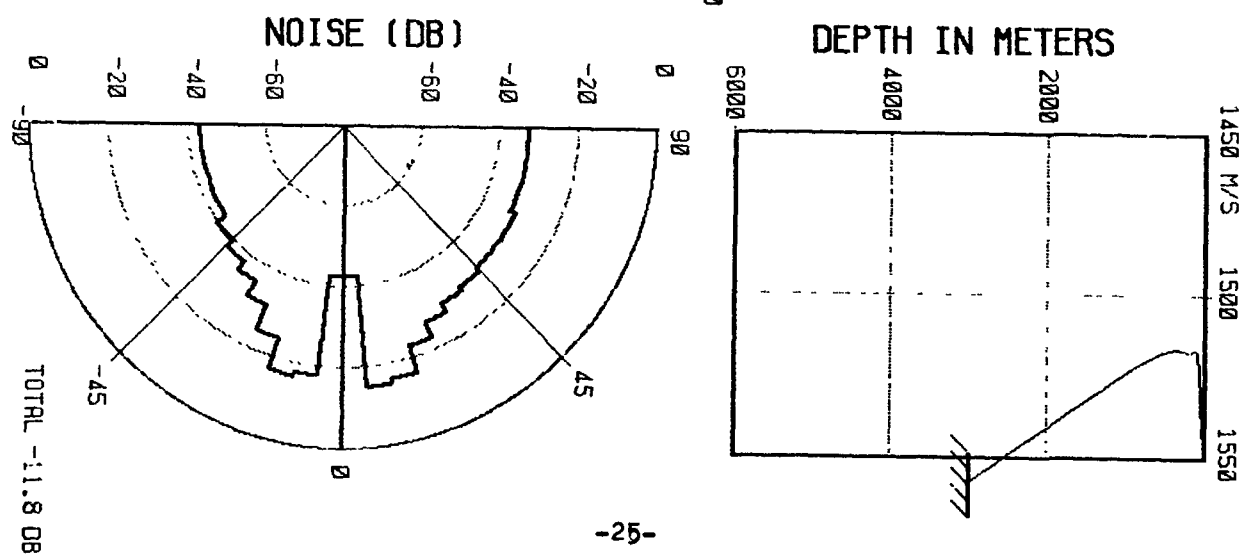
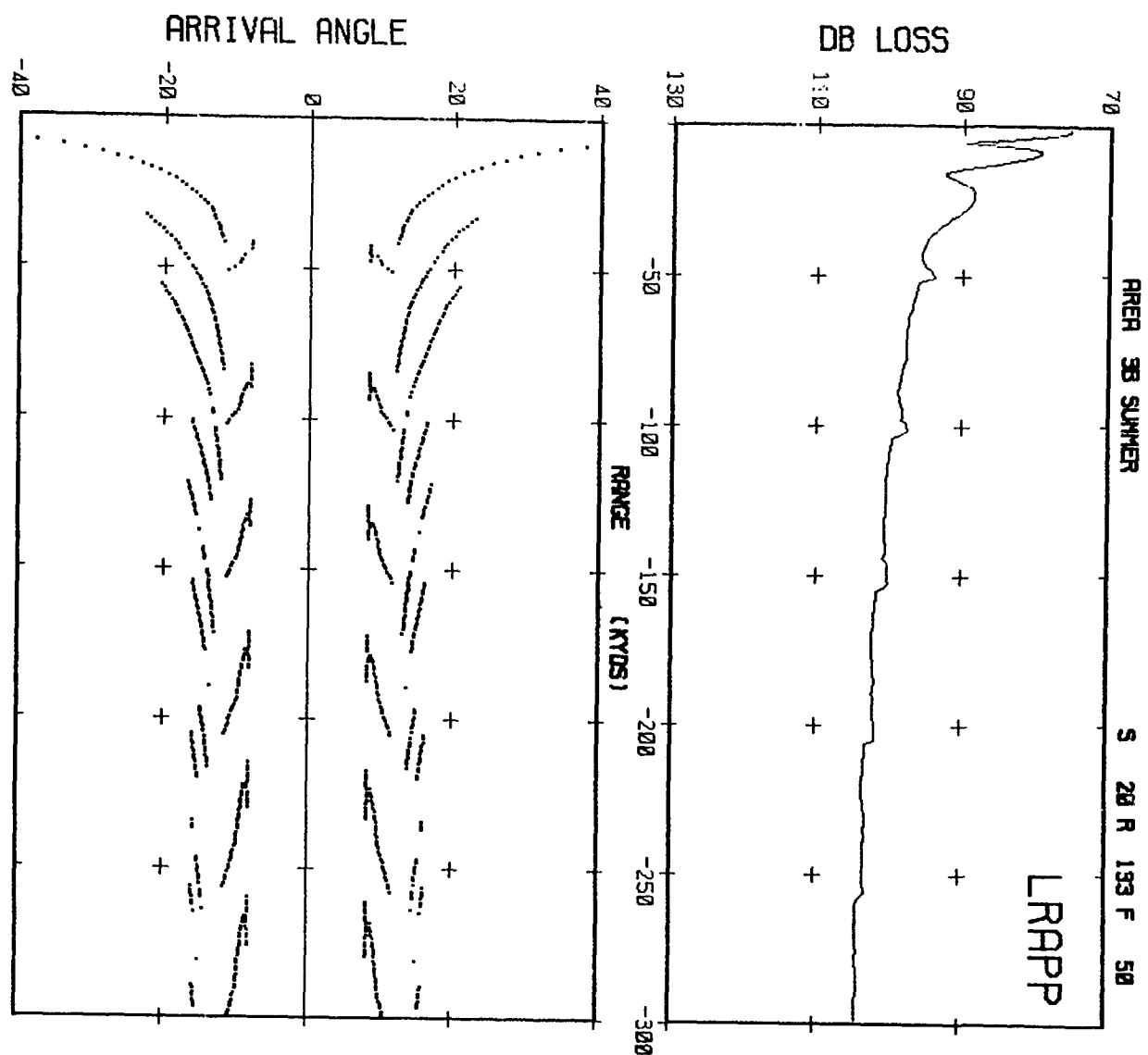
NOISE (DB)

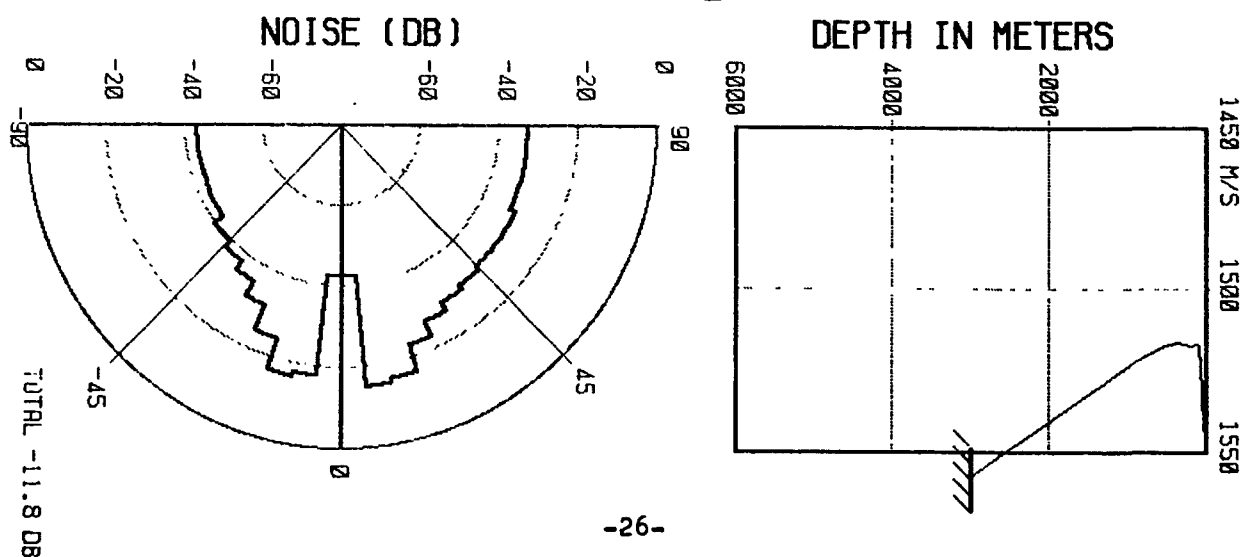
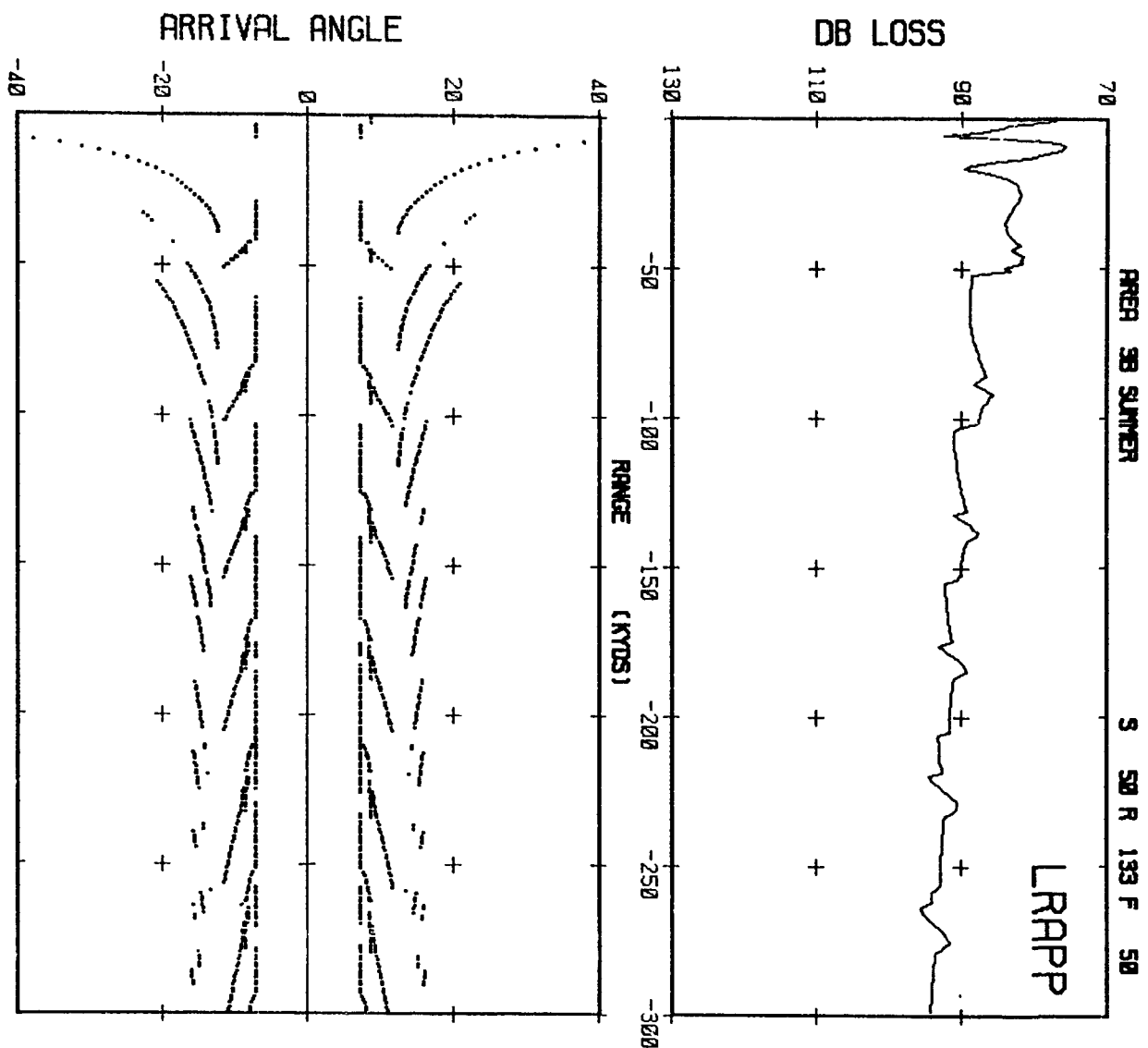










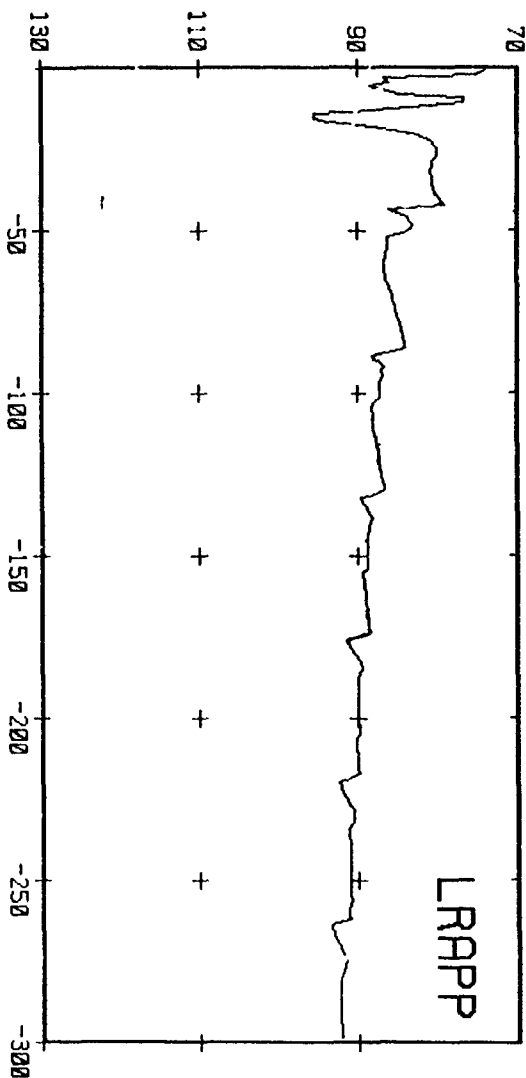


AREA 36 SUMMER

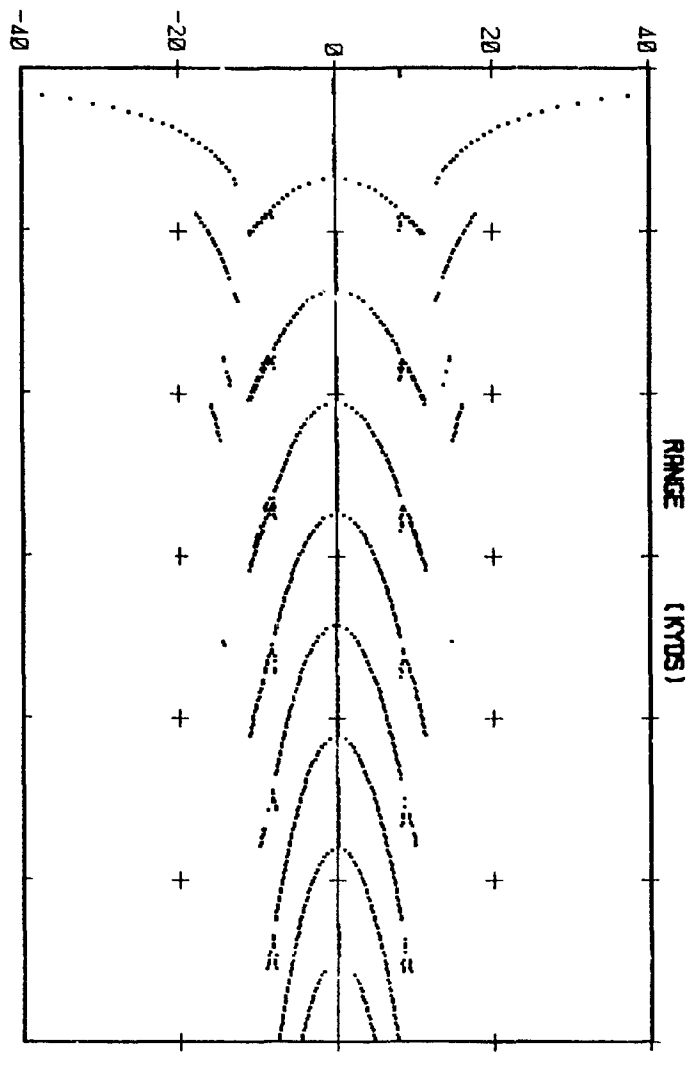
S 233 R 133 F 50

LRAPP

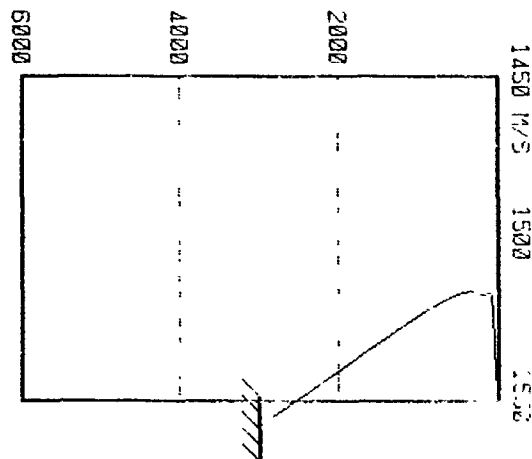
DB LOSS



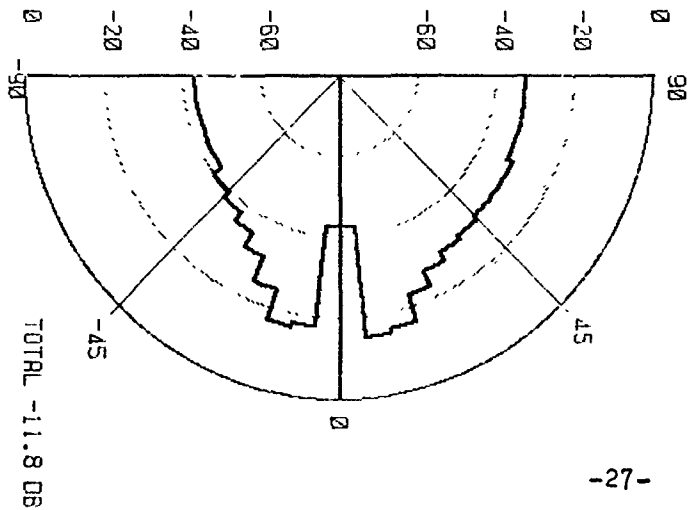
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

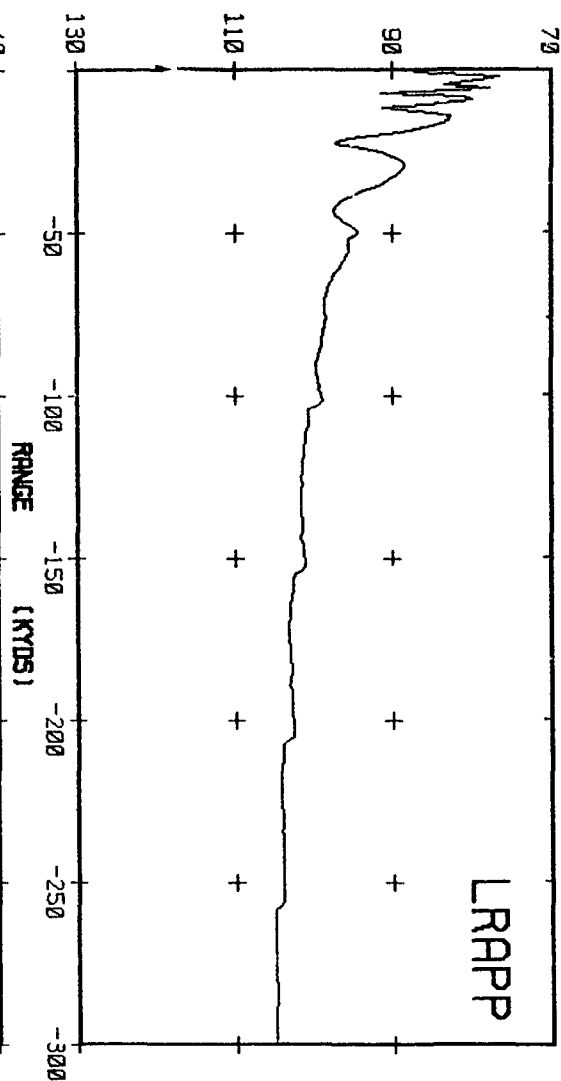


PRER 38 SUMMER

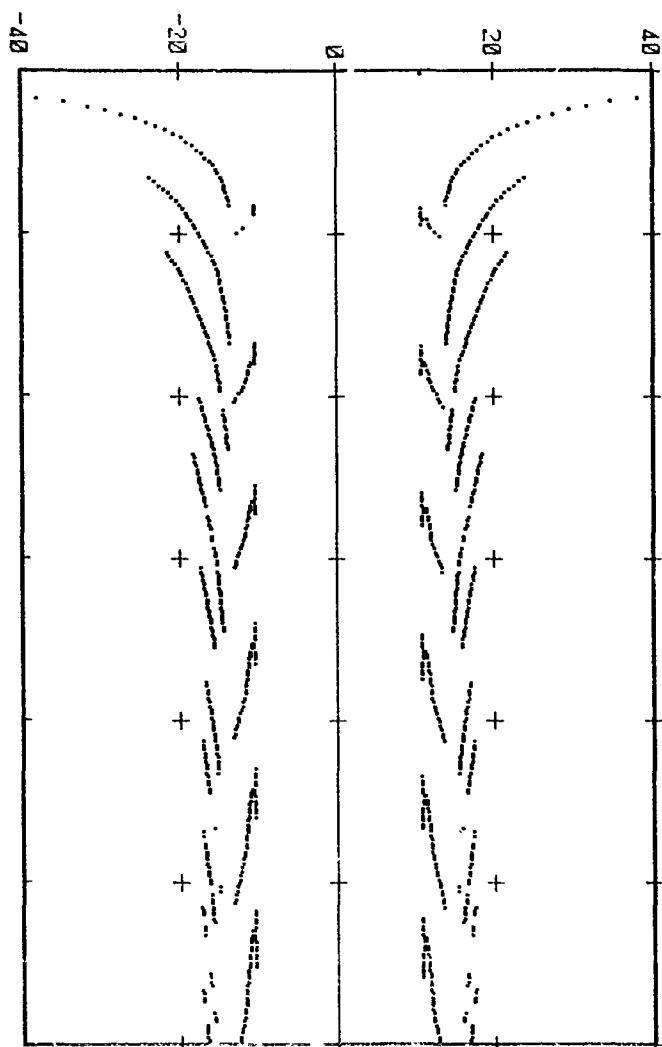
S 20 R 300 F 50

1450 M/S 1500 1550

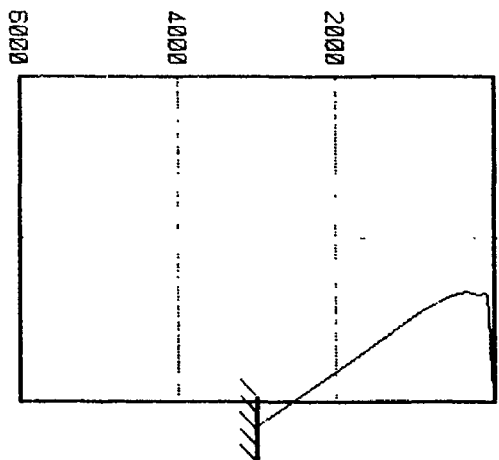
DB LOSS



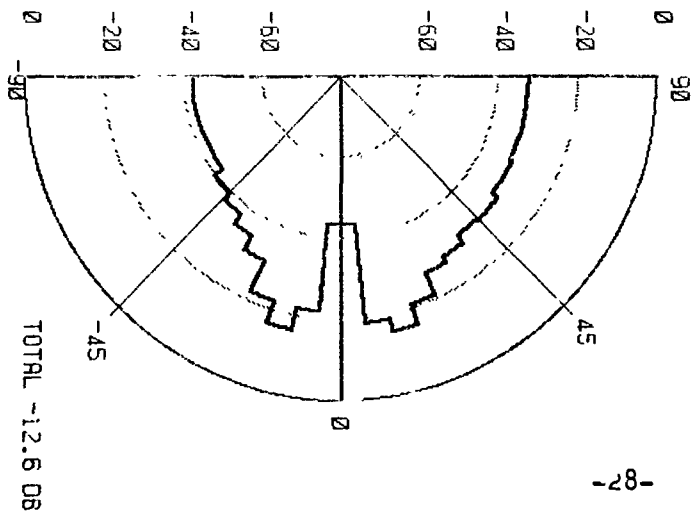
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



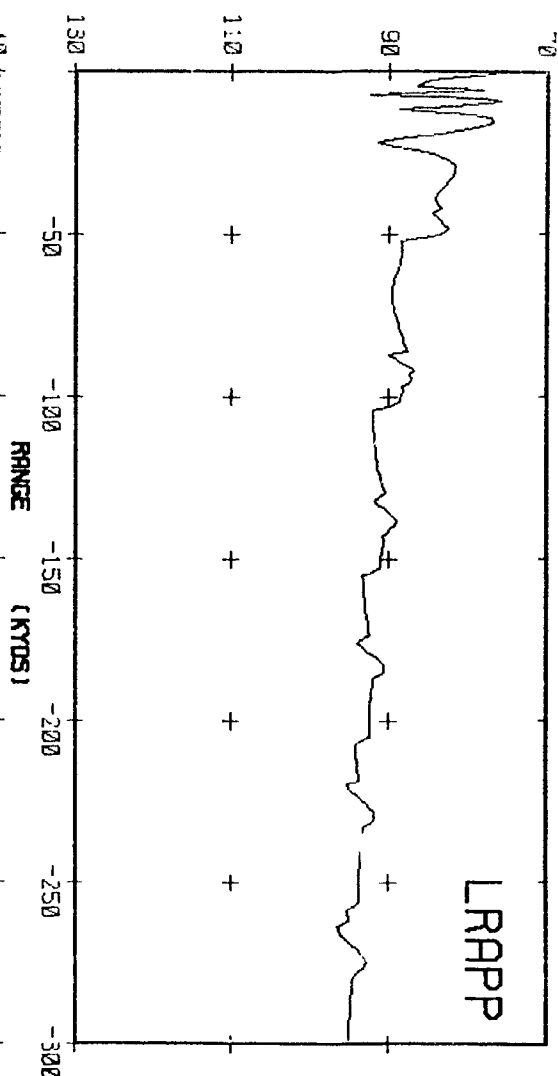


AREA 3B SUMMER

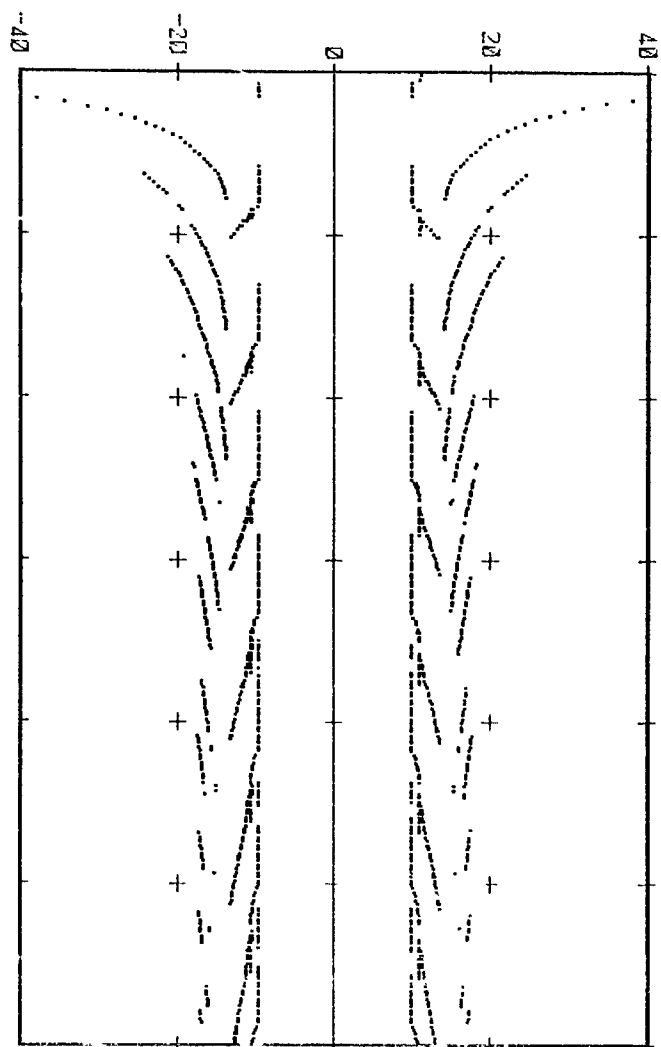
S 50 R 300 F 50

1450 M/S 1500 1550

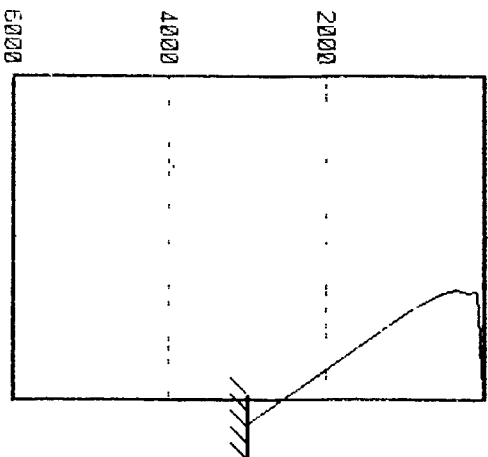
DB LOSS



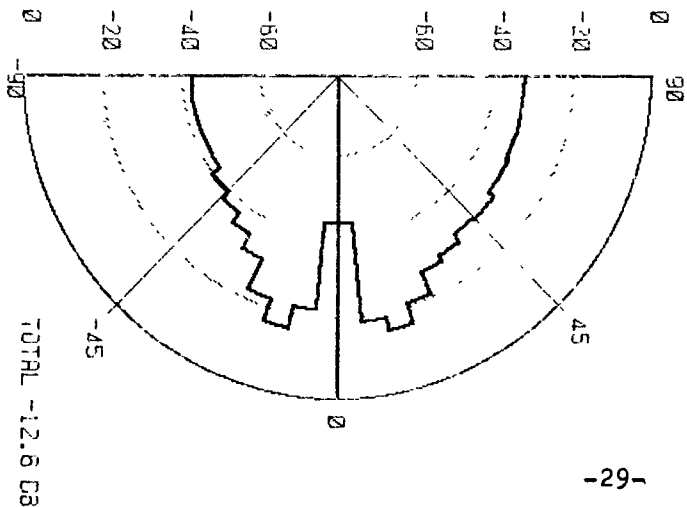
ARRIVAL ANGLE

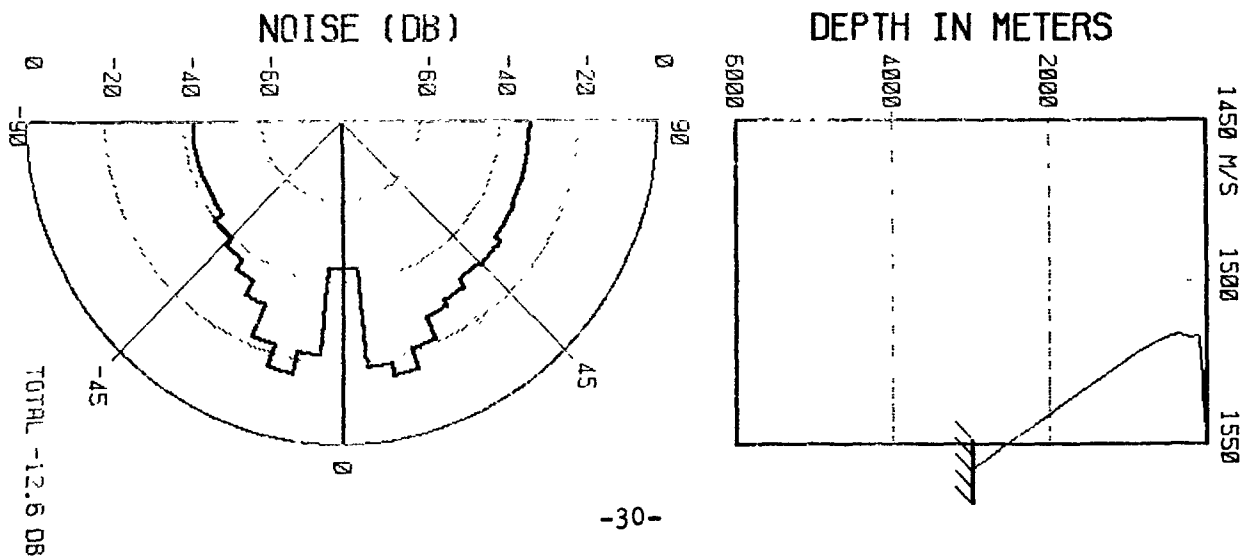
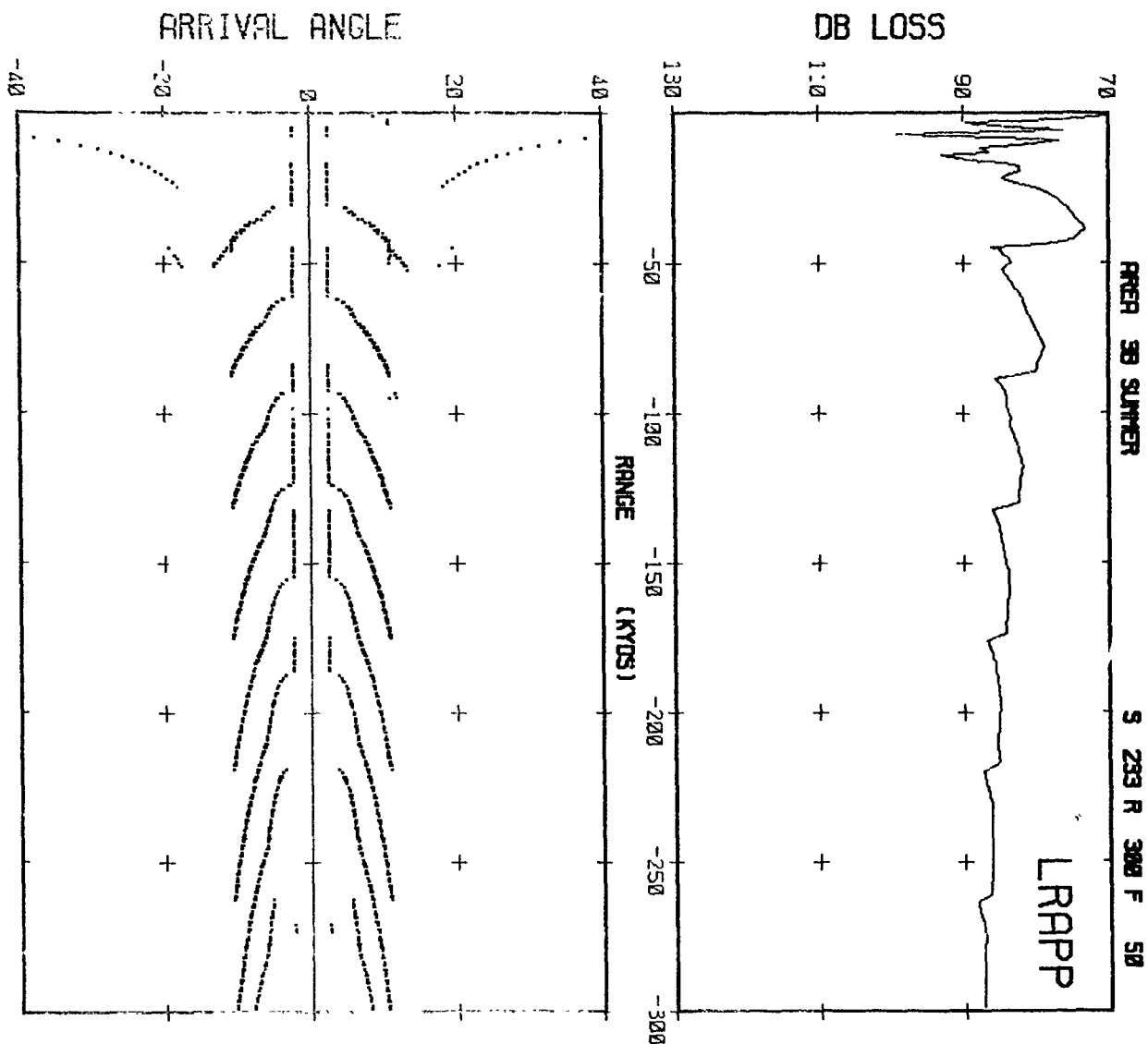


DEPTH IN METERS



NOISE (DB)



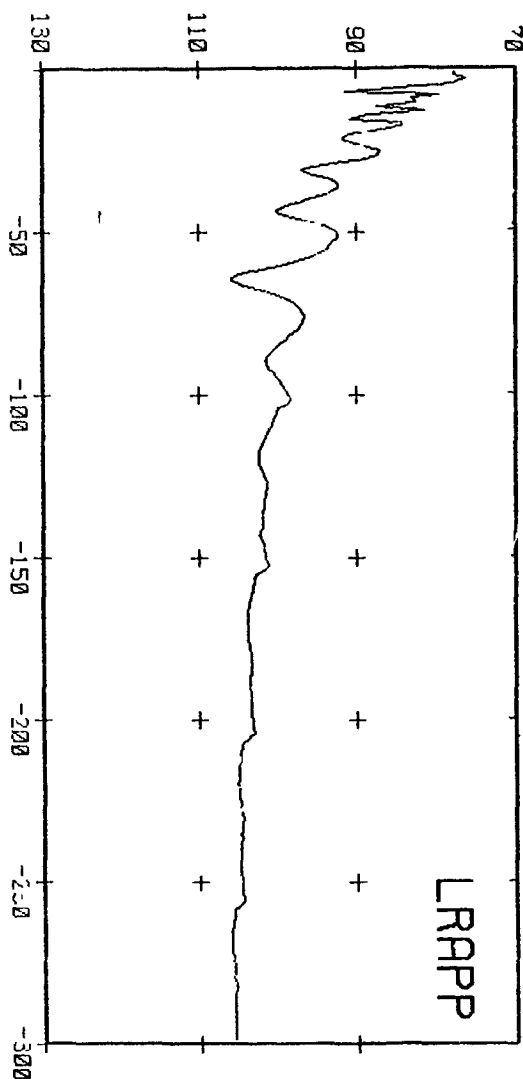


ARRR 38 SUMMER

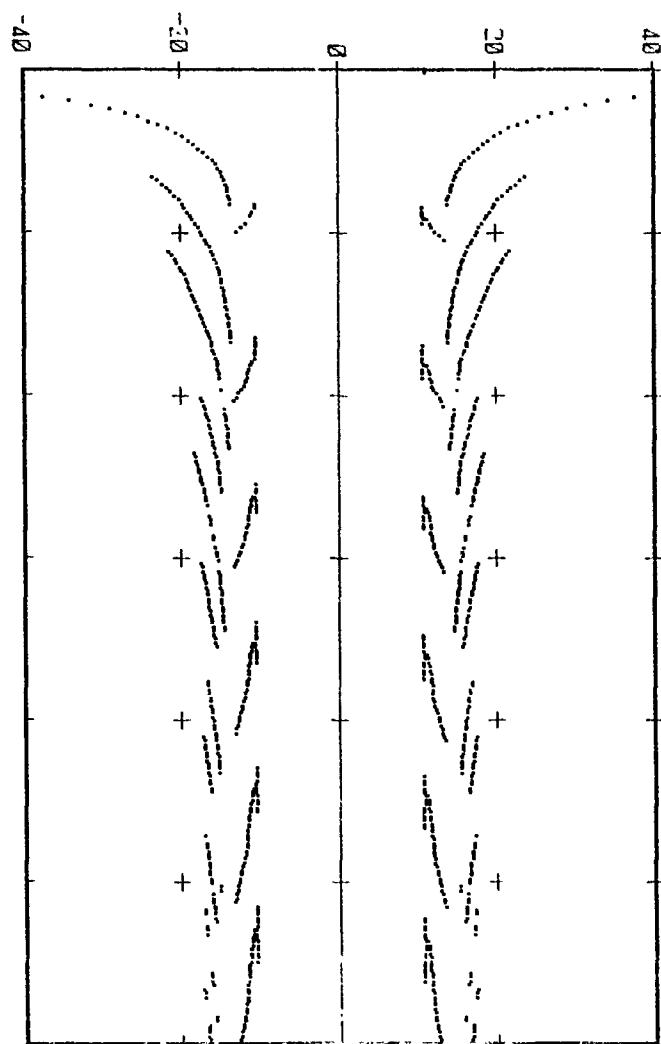
S 28 R 600 F 50

1450 M/S 1500 1550

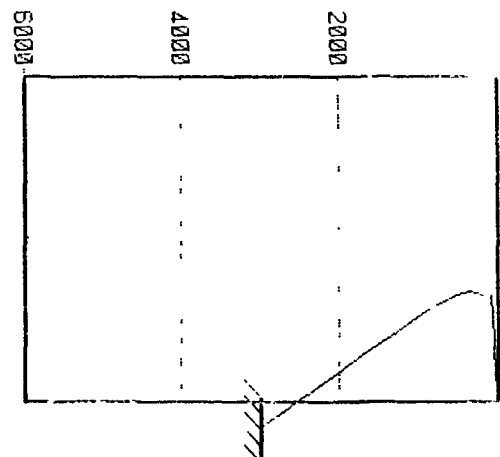
DB LOSS



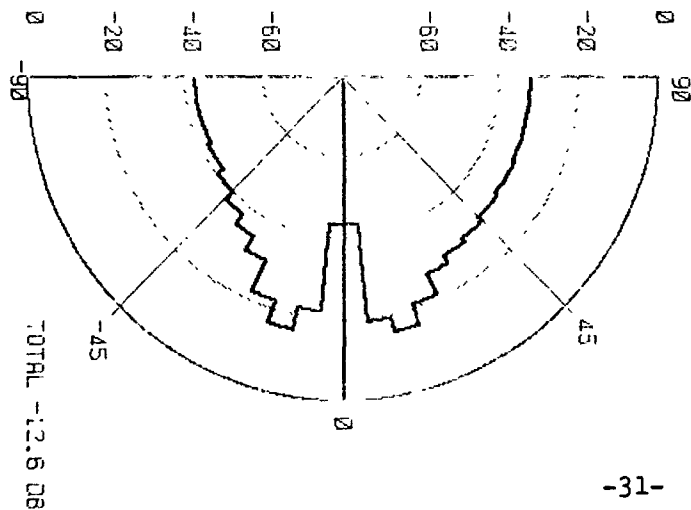
ARRIVAL ANGLE

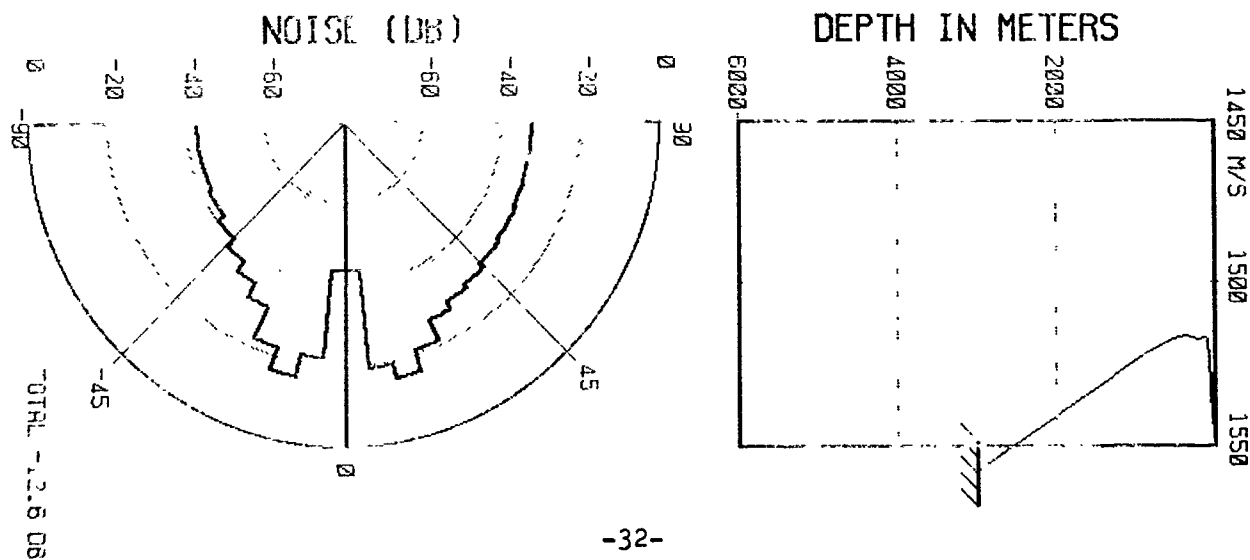
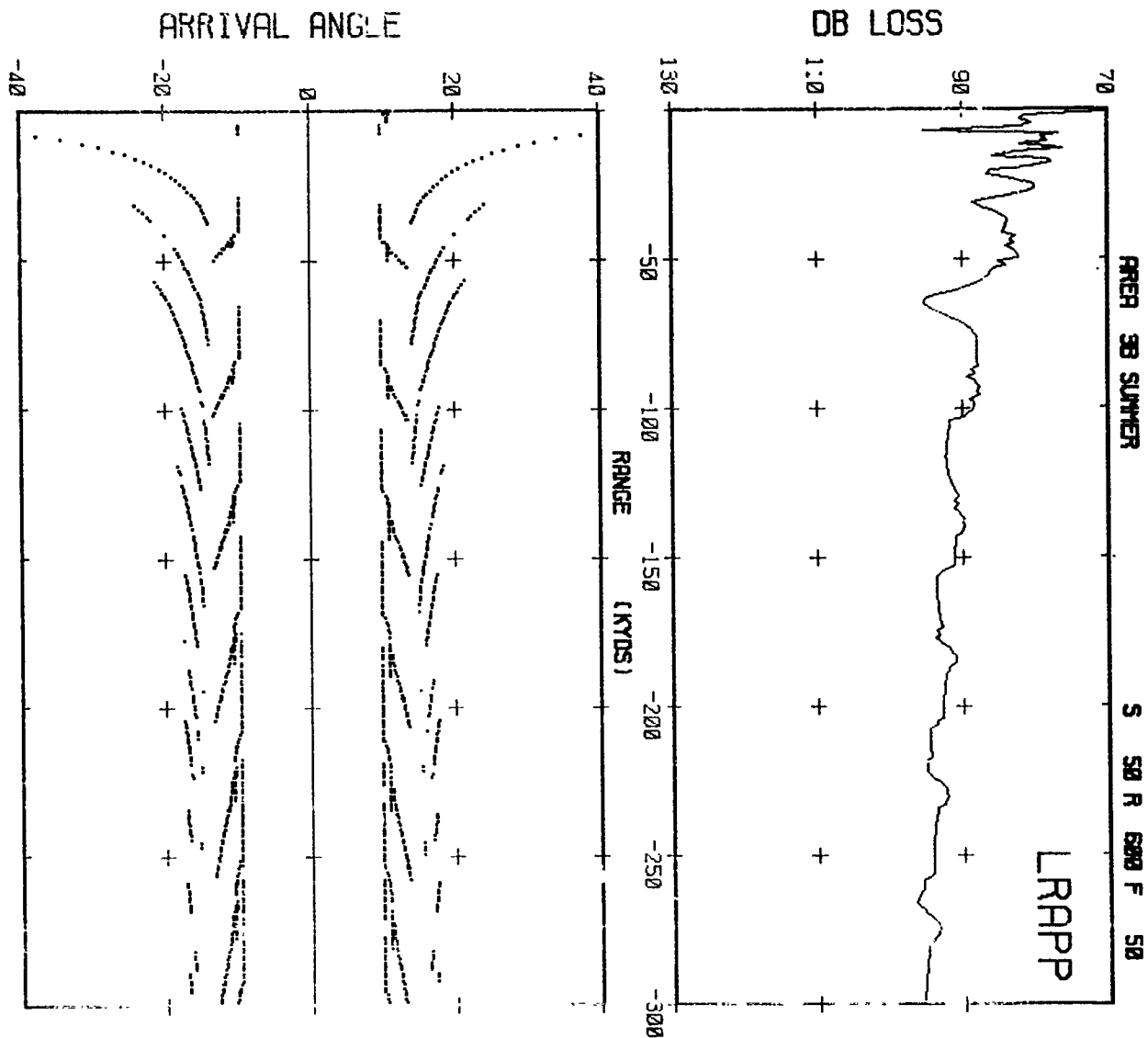


DEPTH IN METERS

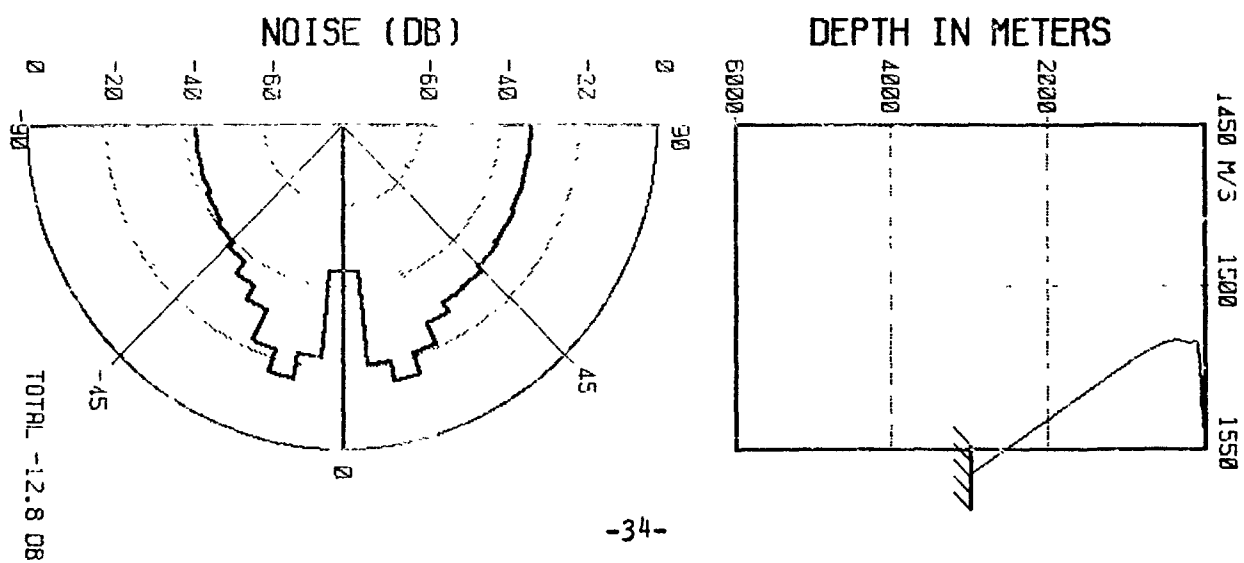
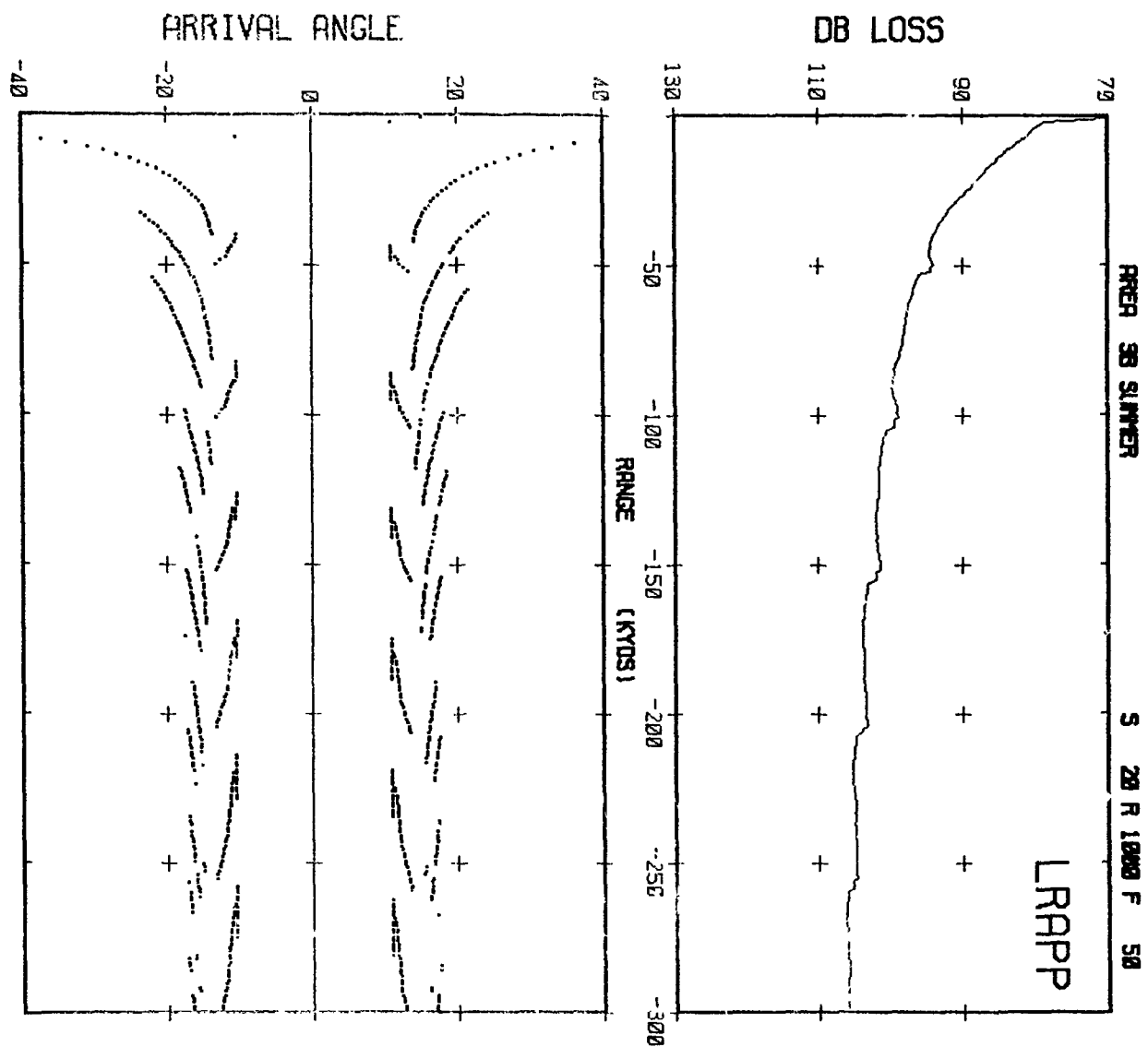


NOISE (DB)





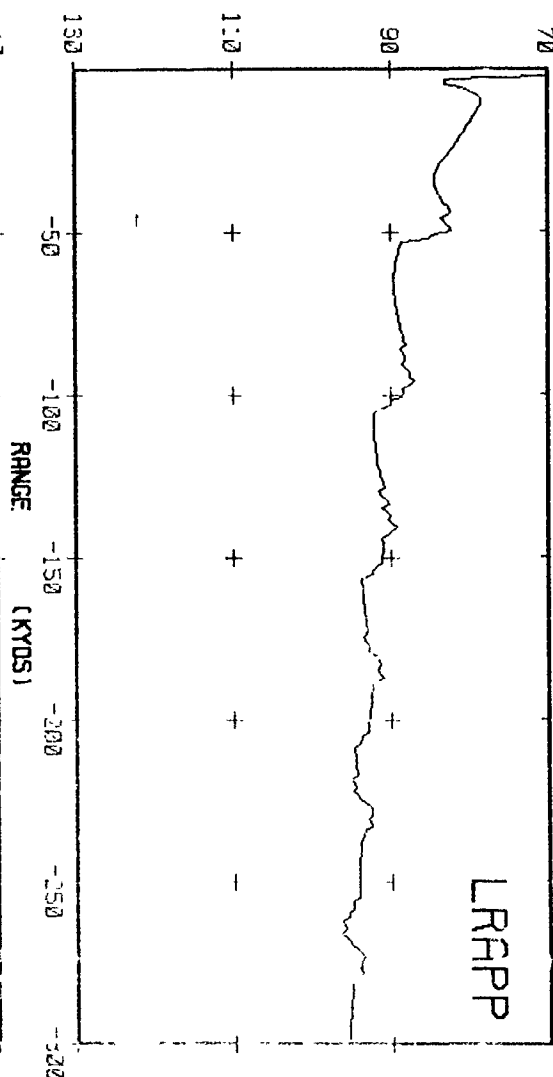




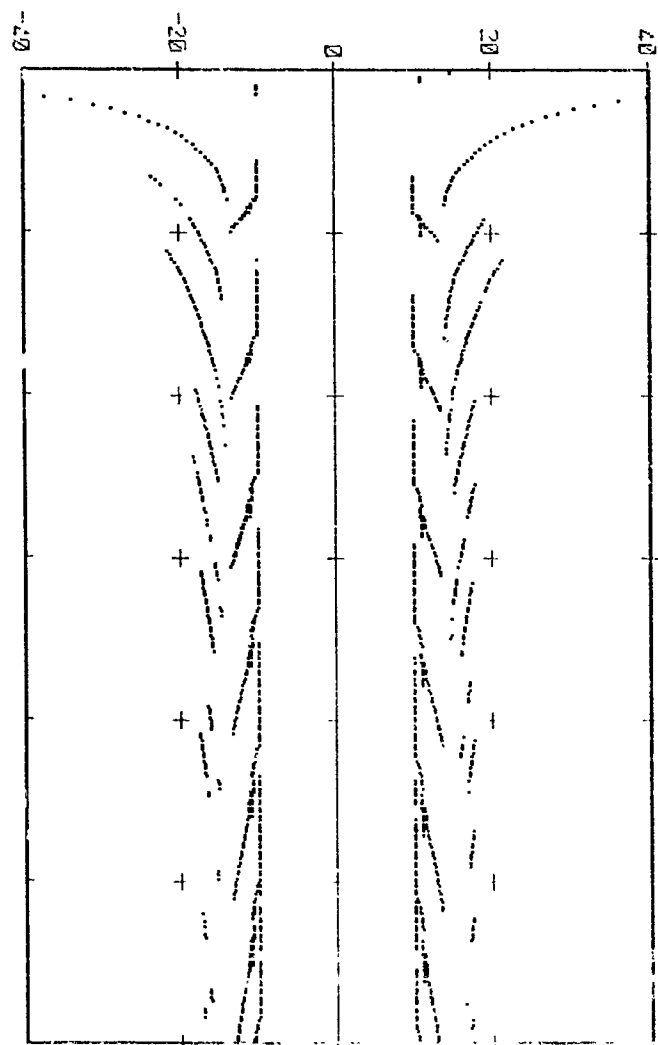
AREA 3B SUMMER

S 50 R 1000 F 50

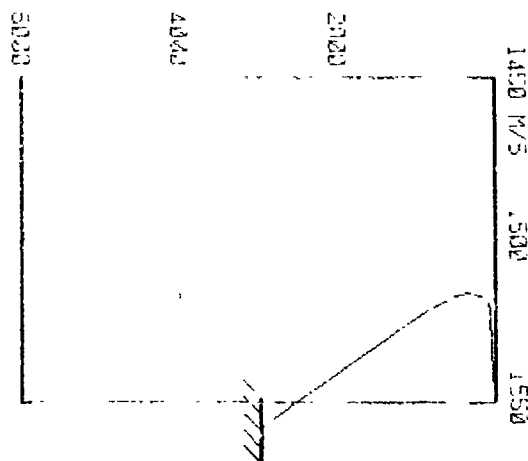
DB LOSS



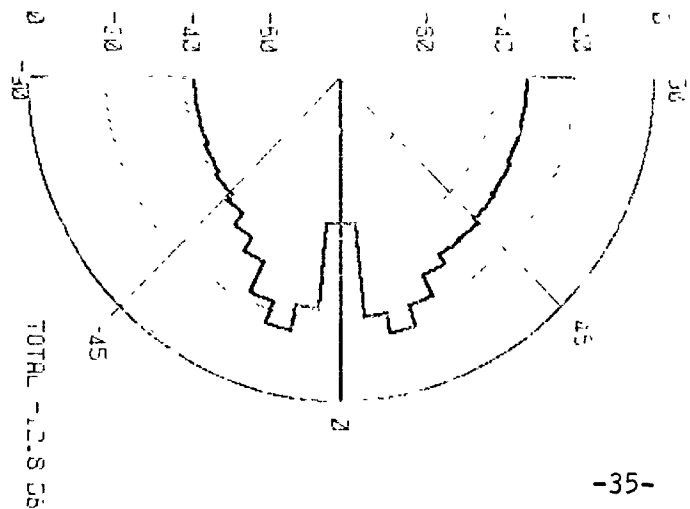
ARRIVAL ANGLE

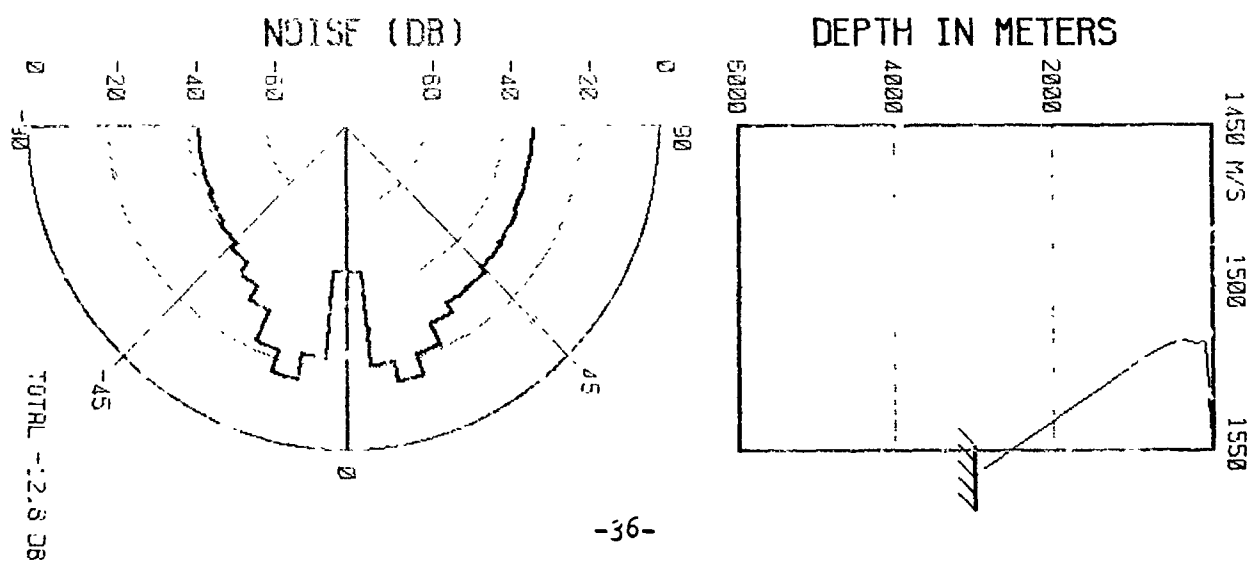
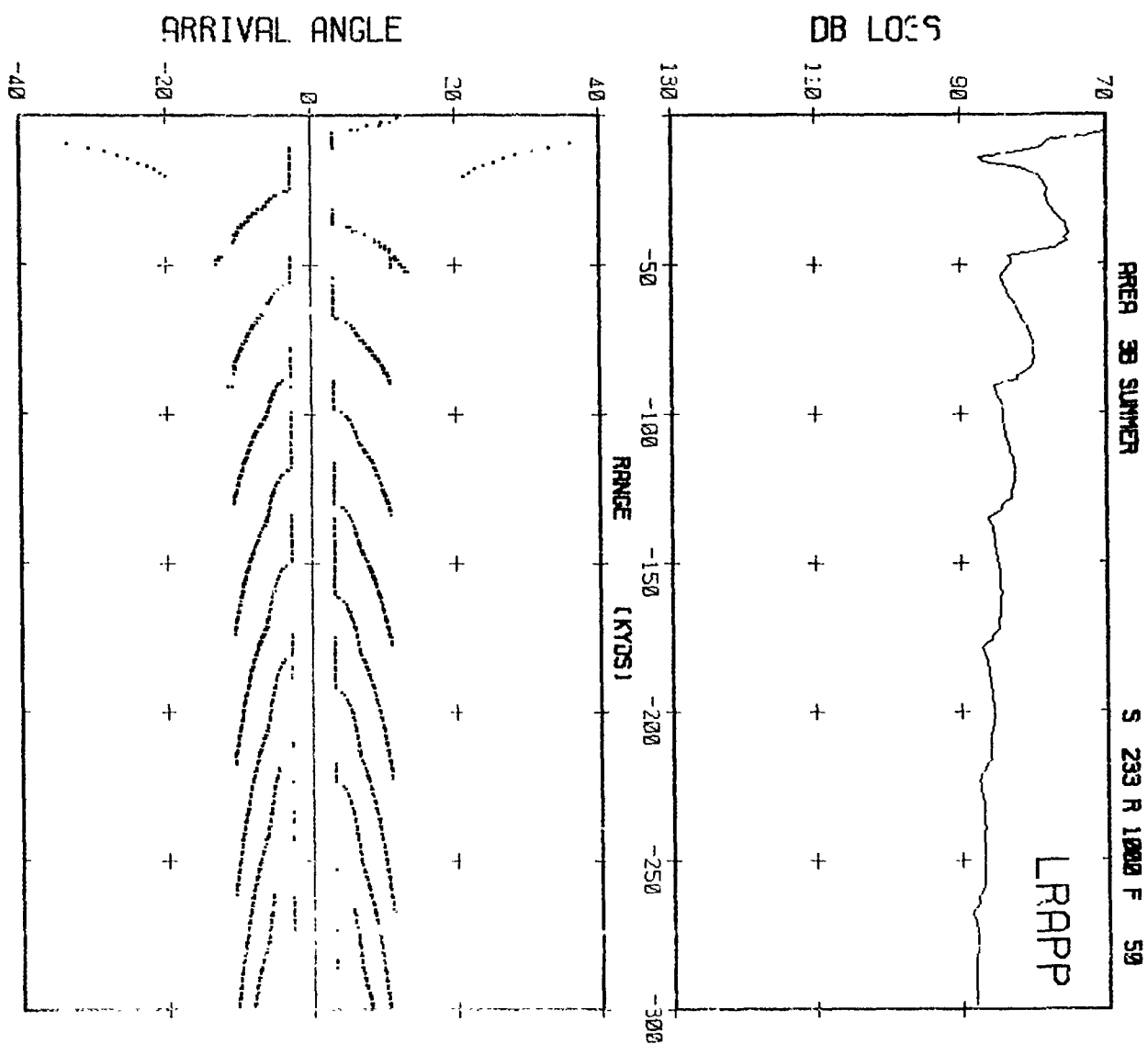


DEPTH IN METERS



NOISE (DB)

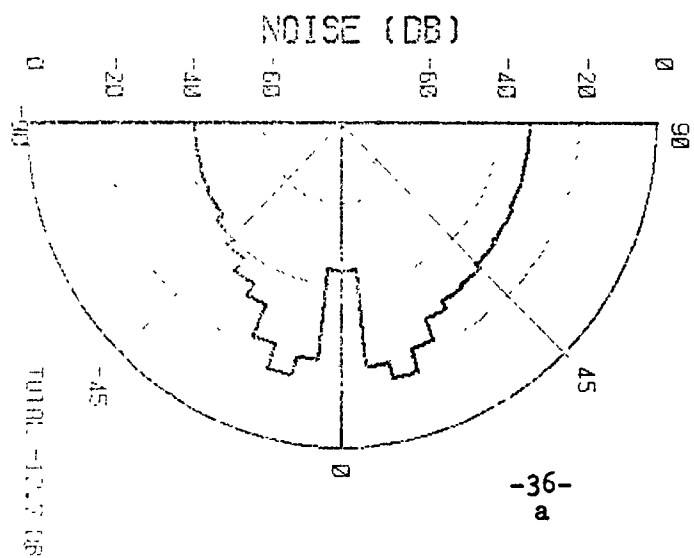
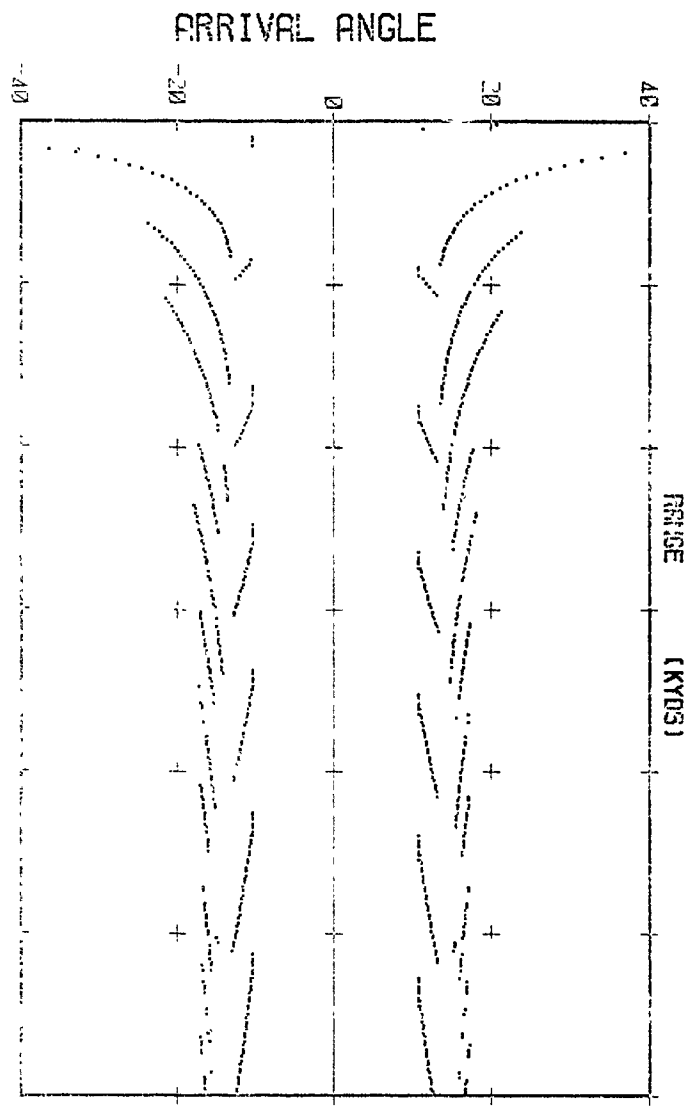
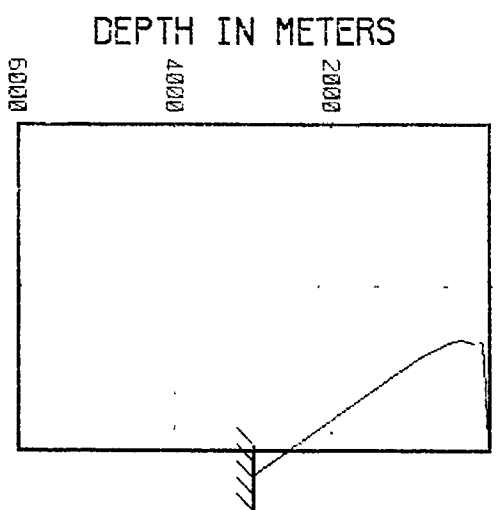
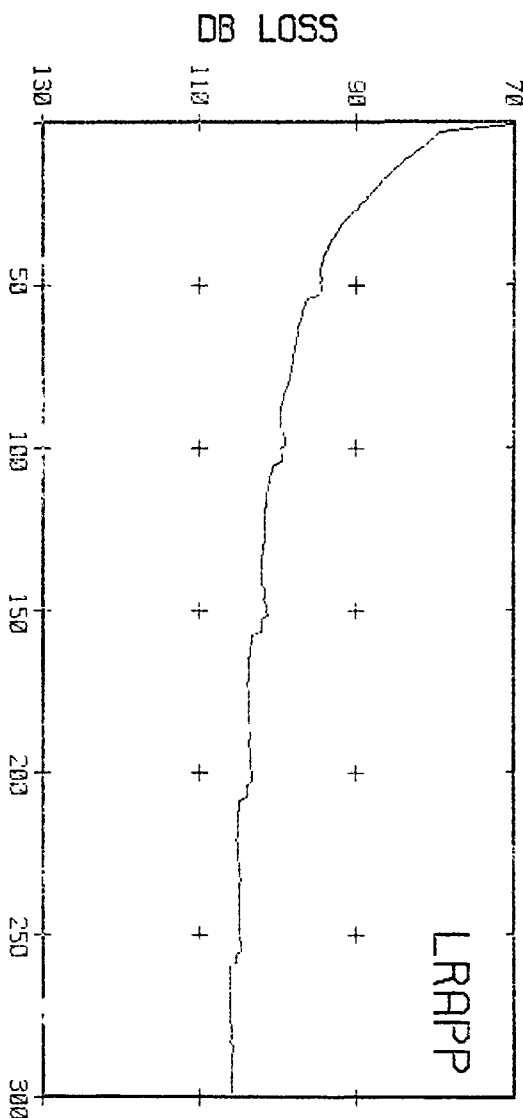


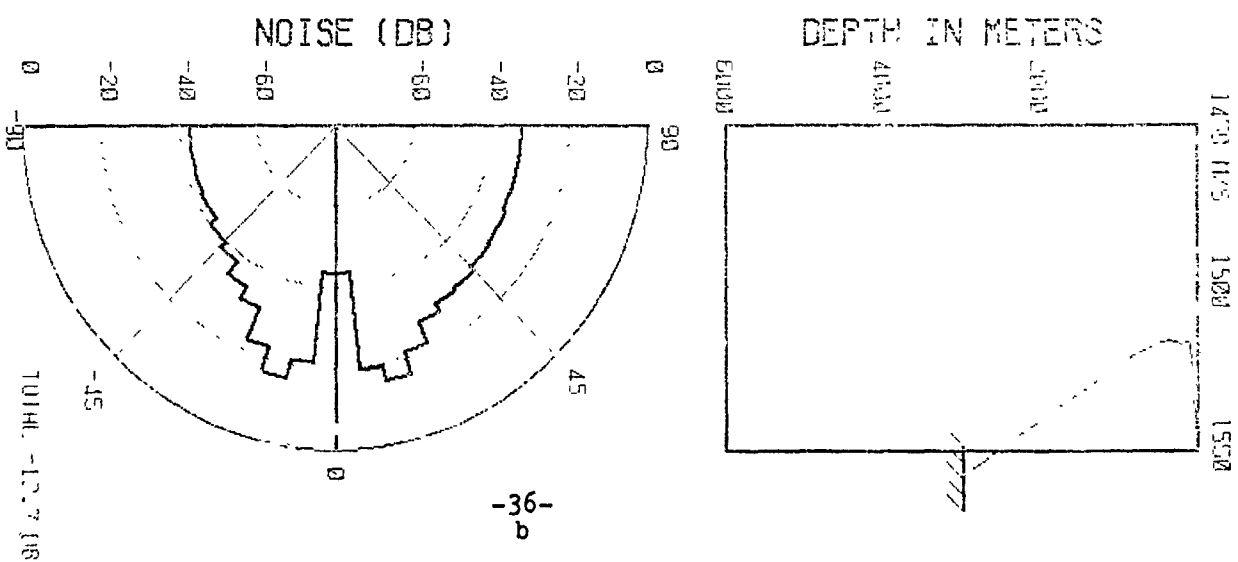
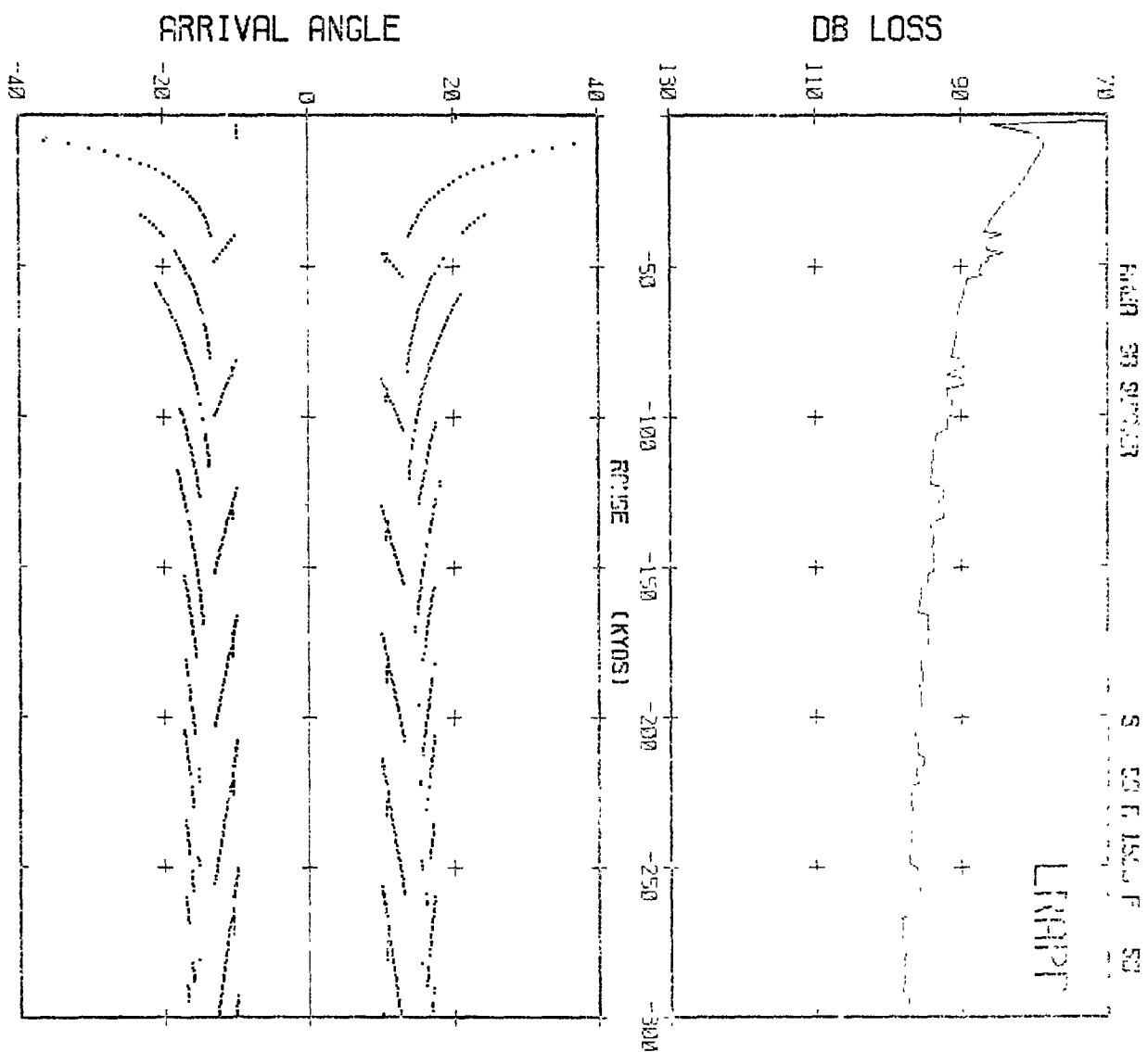




S 23 R 1566 F 50

1450 M/S	1500	1550
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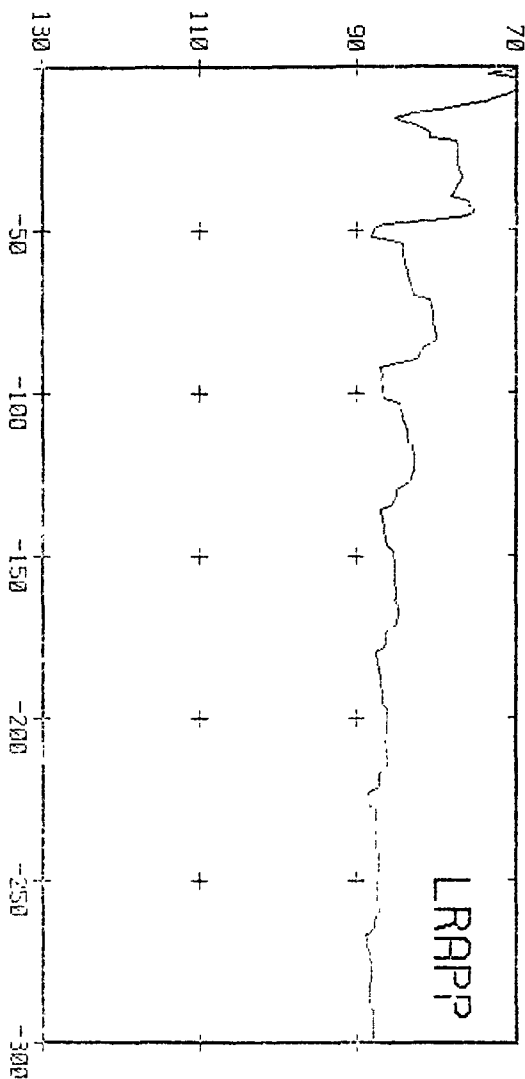


AREA 38 SUMMER

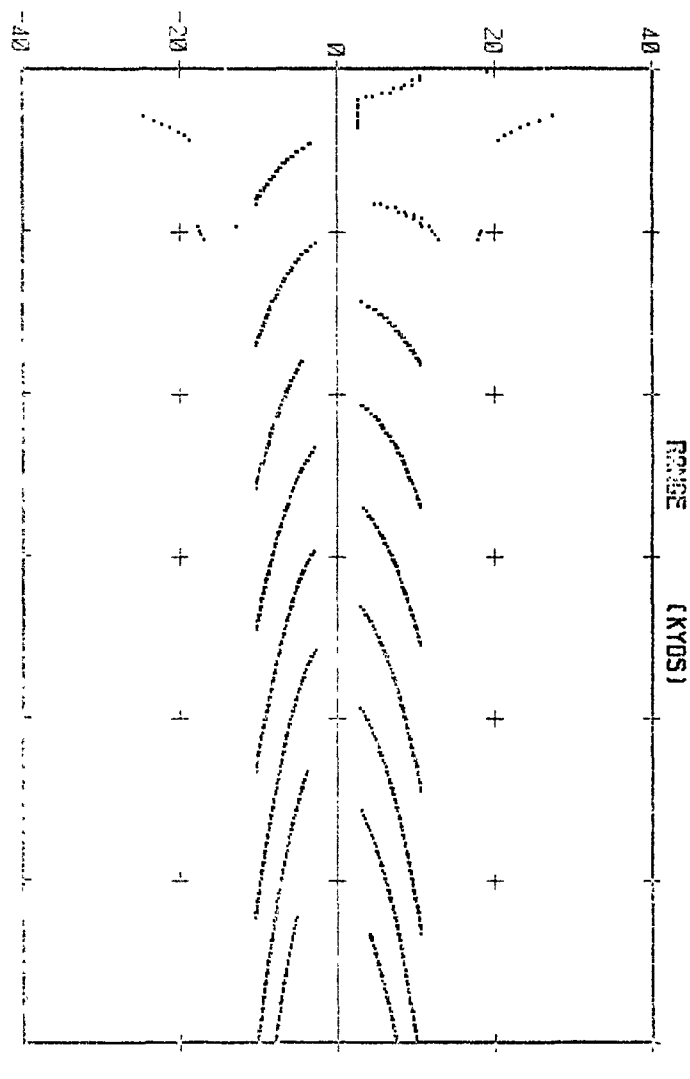
S 233 R 1500 F 50

1450 M/S 1500 1550

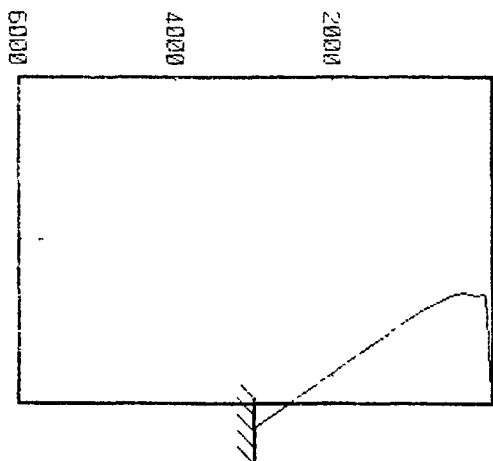
DB LOSS



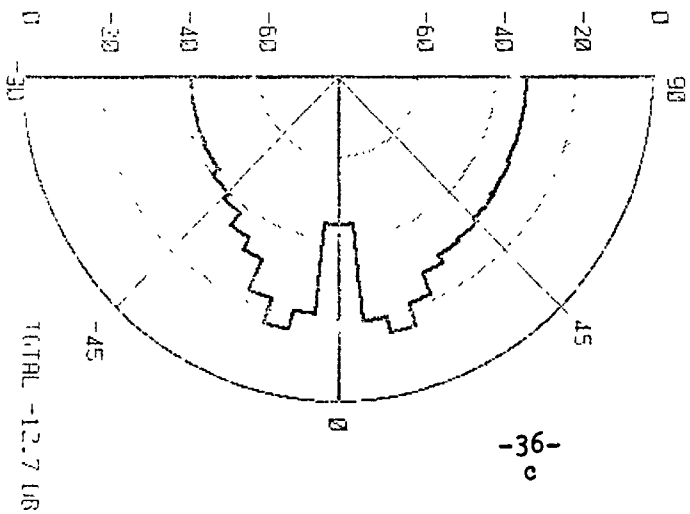
ARRIVAL ANGLE

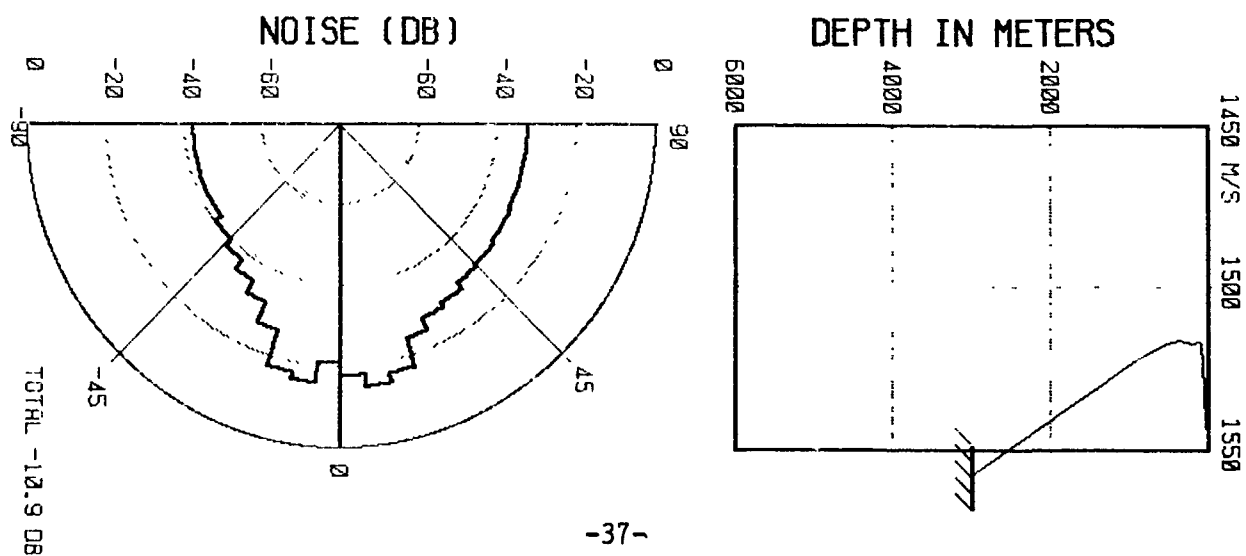
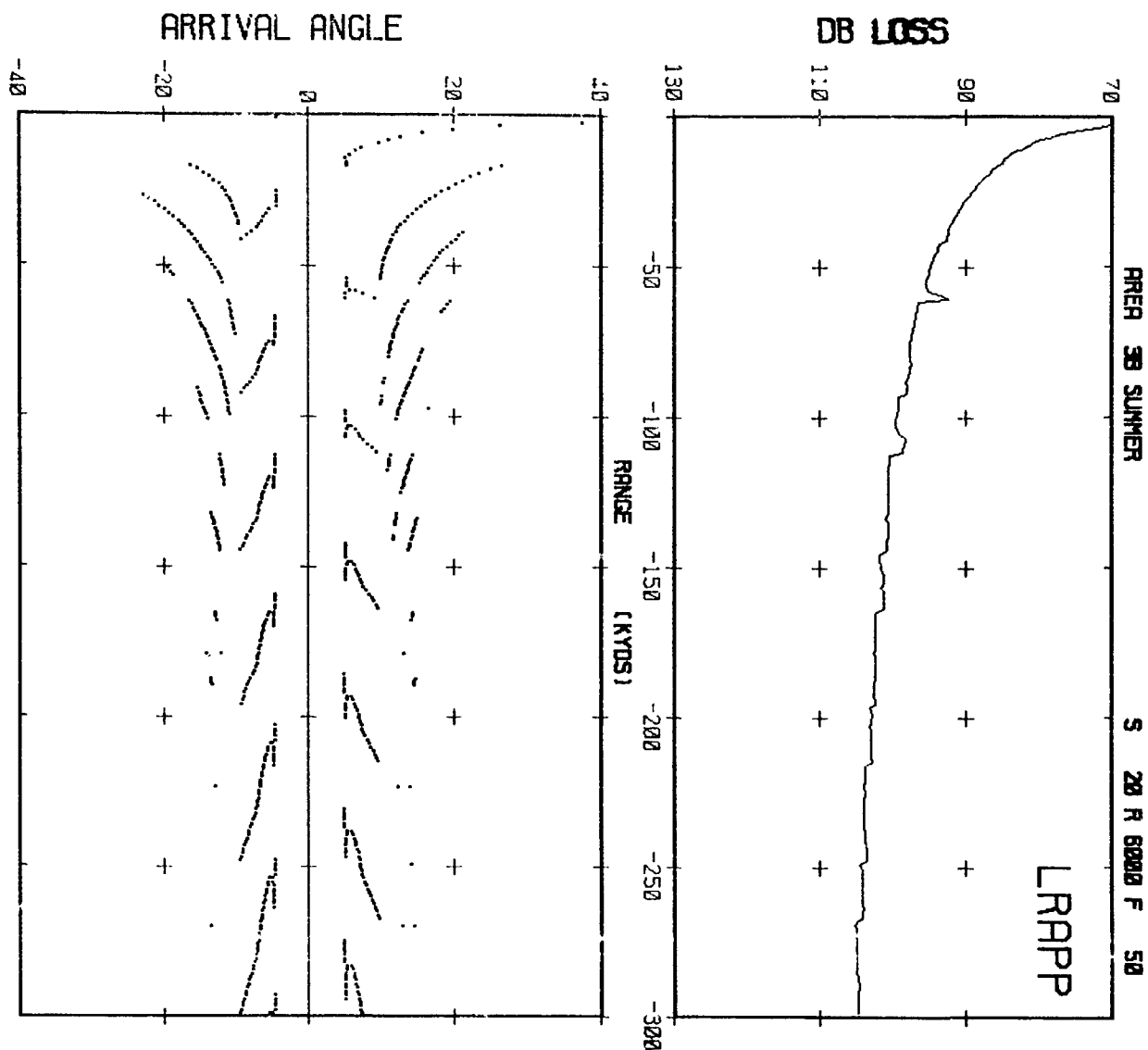


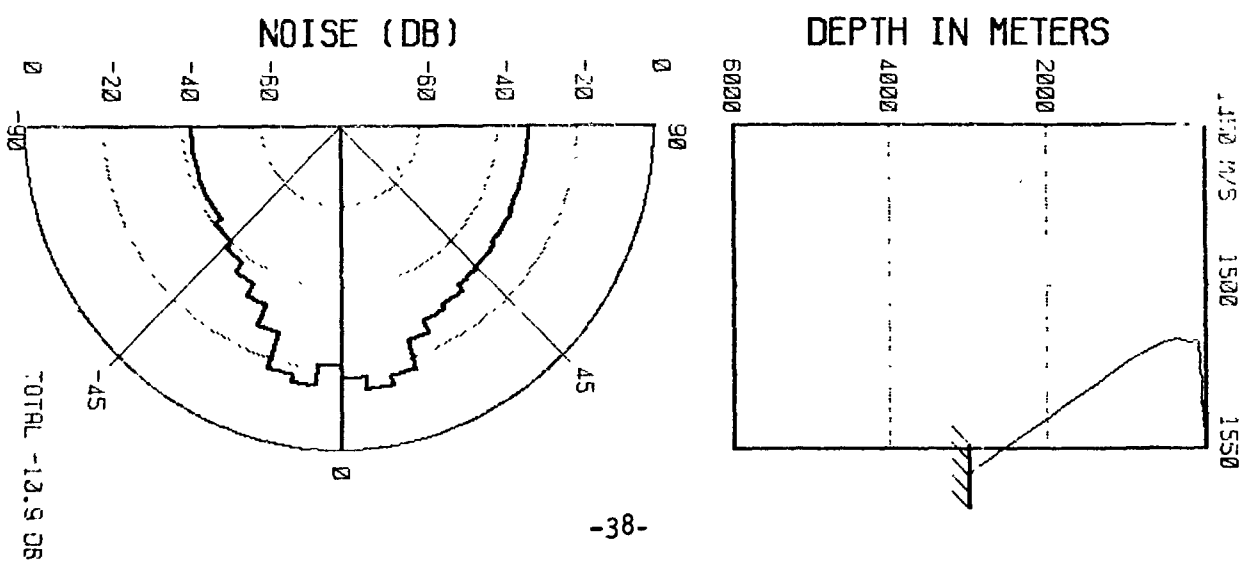
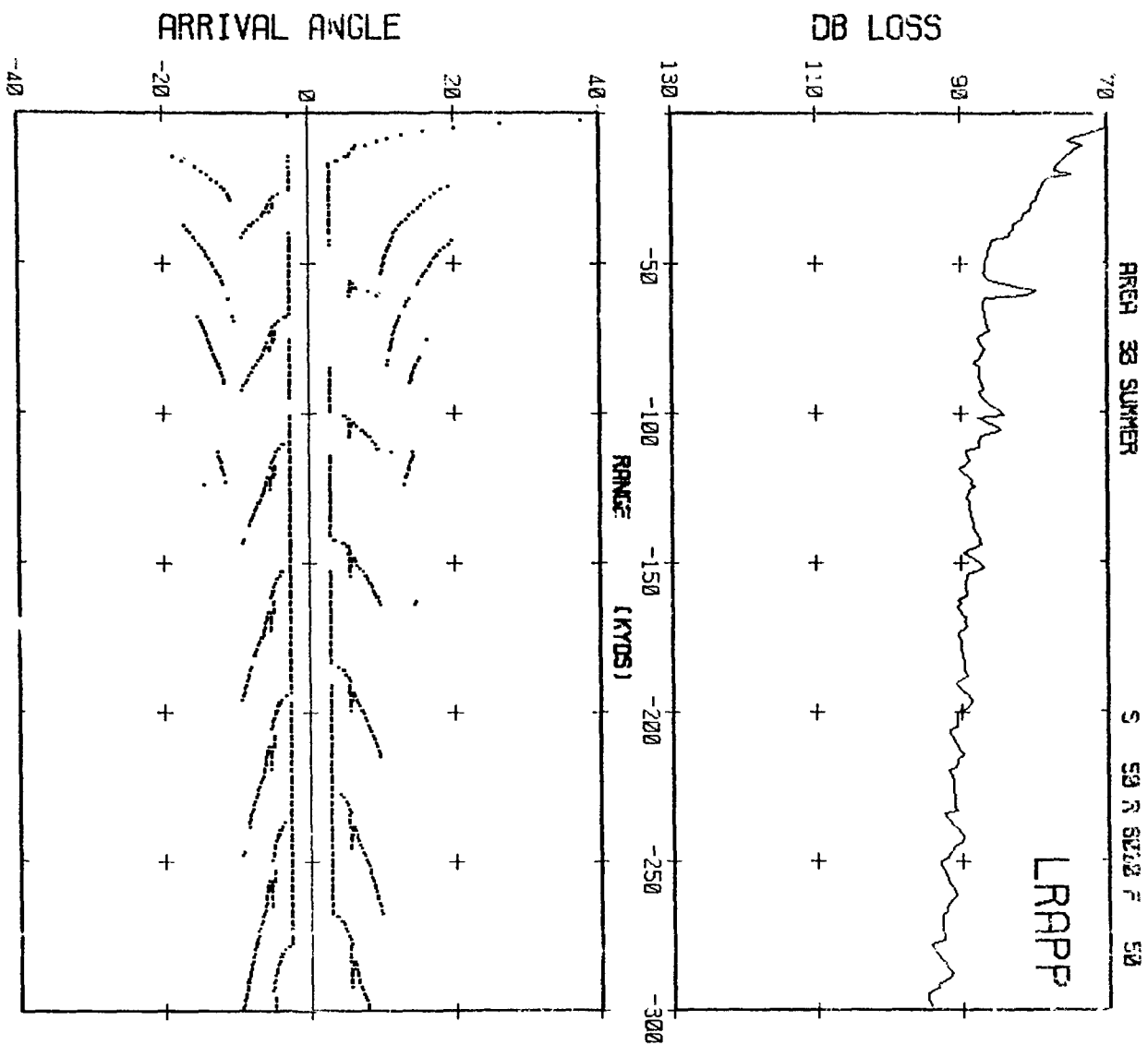
DEPTH IN METERS



NOISE (DB)





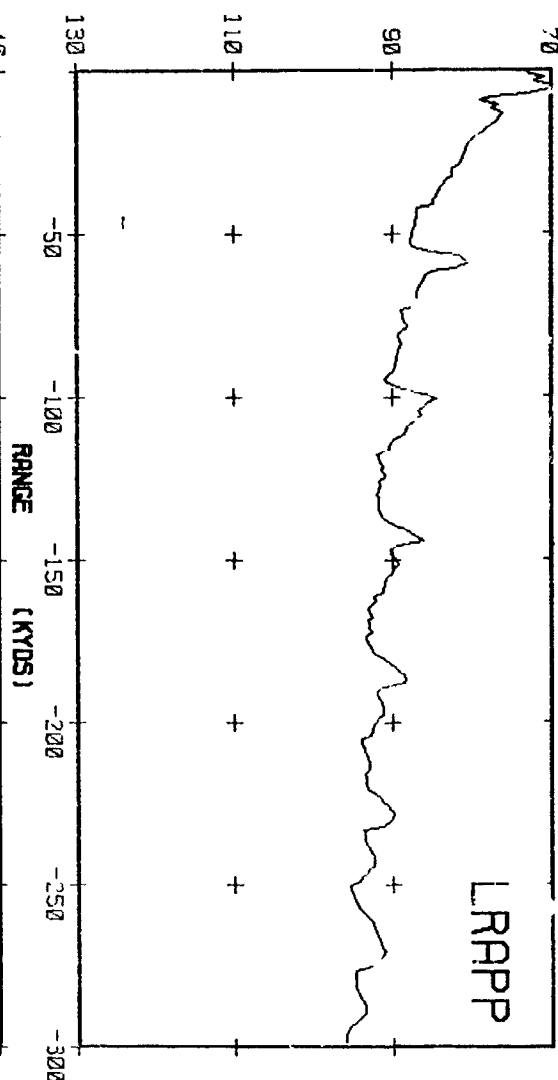


ARRER 33 SUMMER

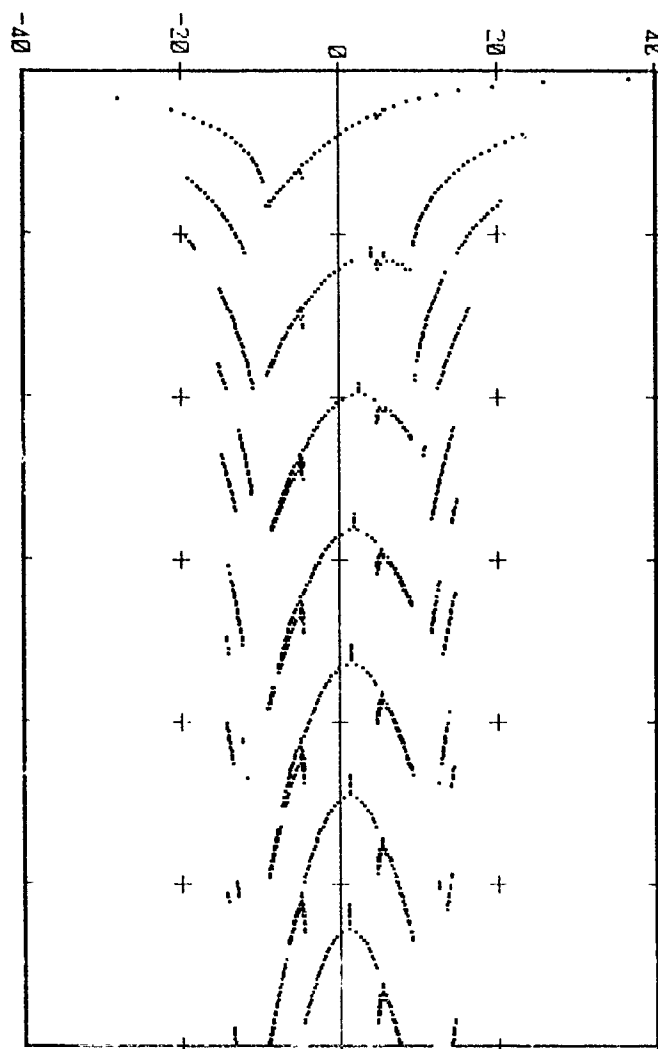
S 233 R 6000 F 50

LRAPP

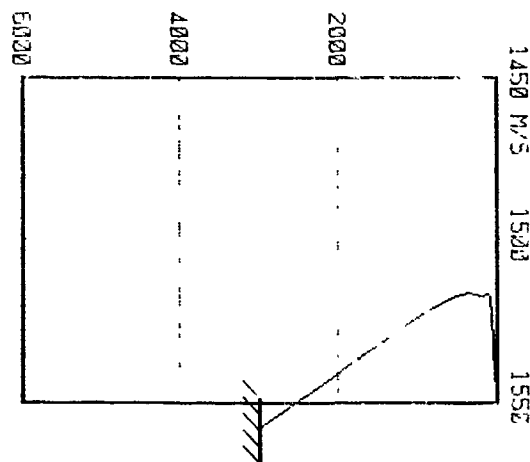
DB LOSS



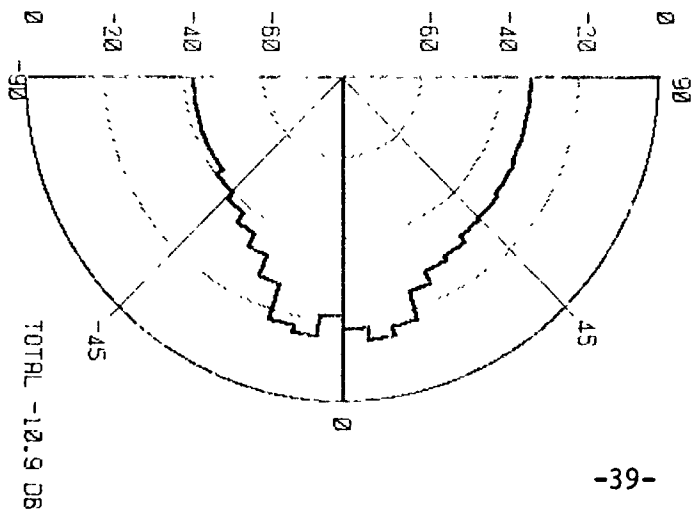
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



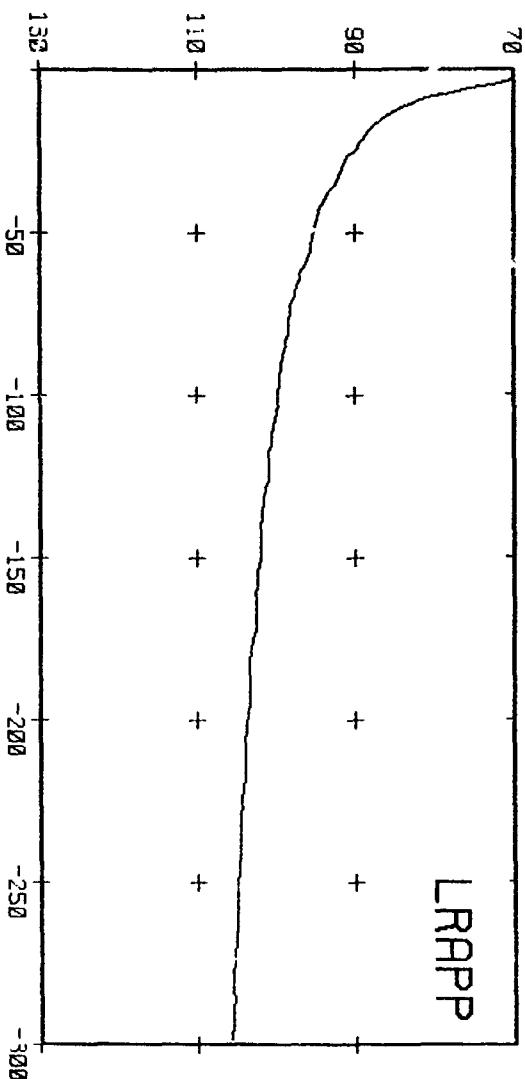
AREA 50 SUMMER

S 20 R 9842 F 50

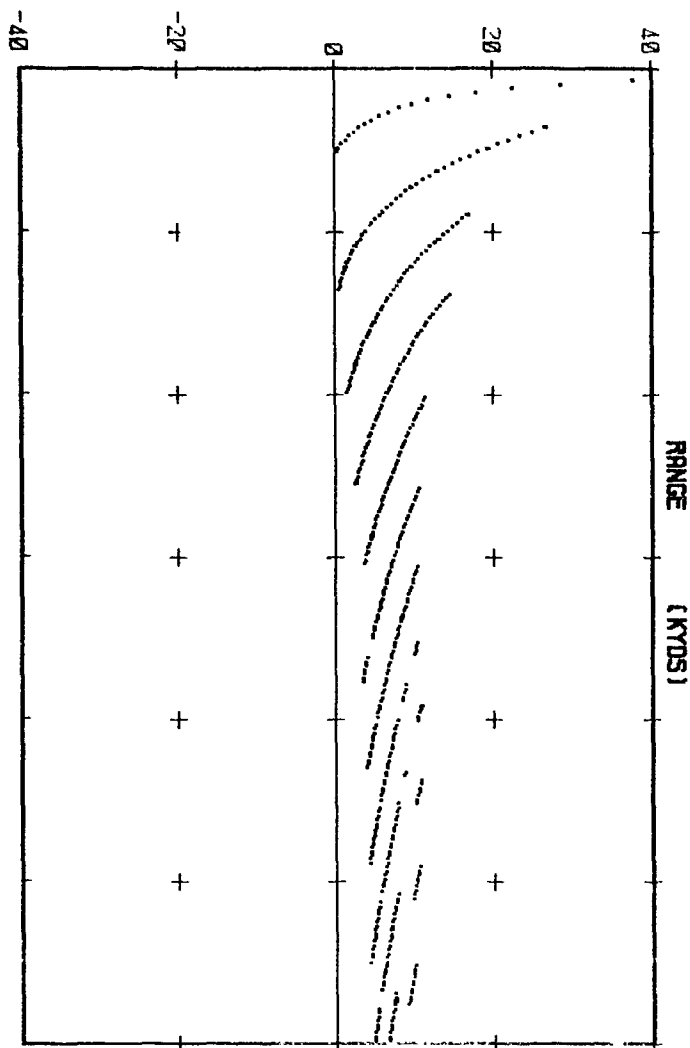
1450 M/S 1500

1550

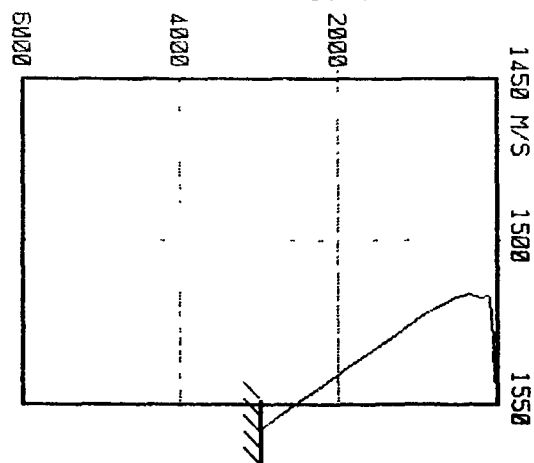
DB LOSS



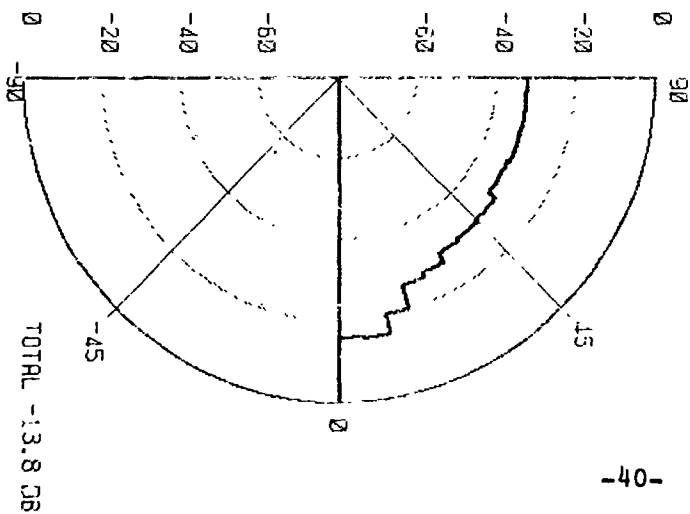
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

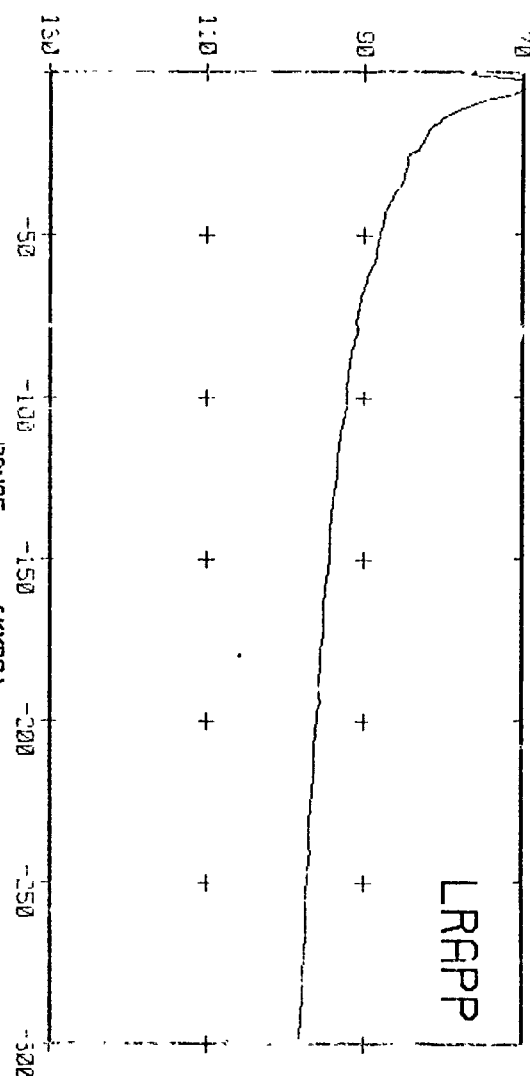


ARRR 3B SUMMER

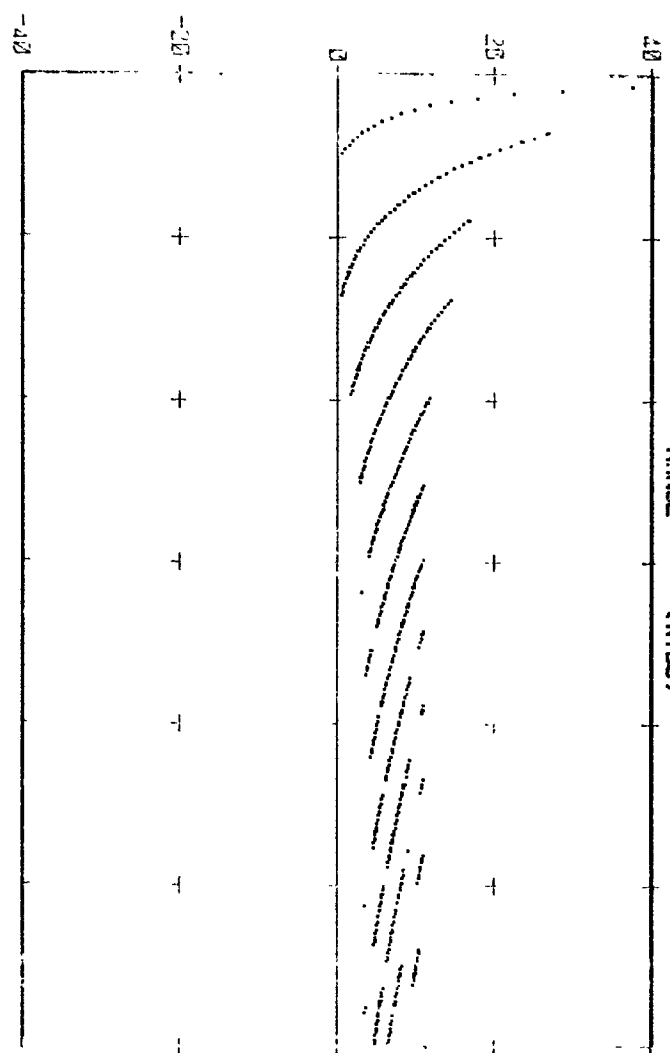
S 50 R 9842 F 50

1450 M/S 1500 1550

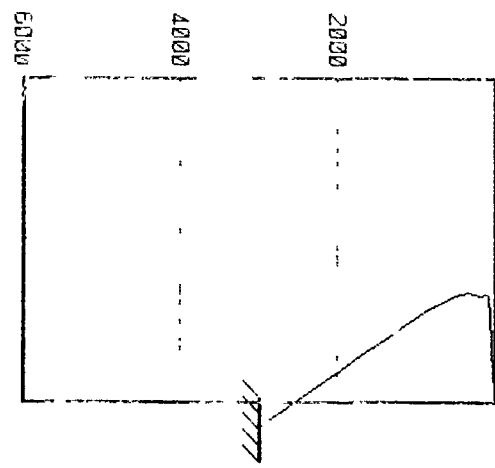
DB LOSS



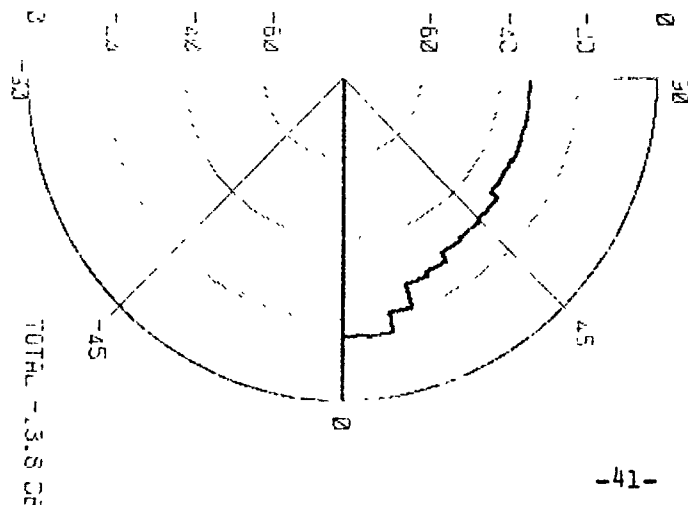
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



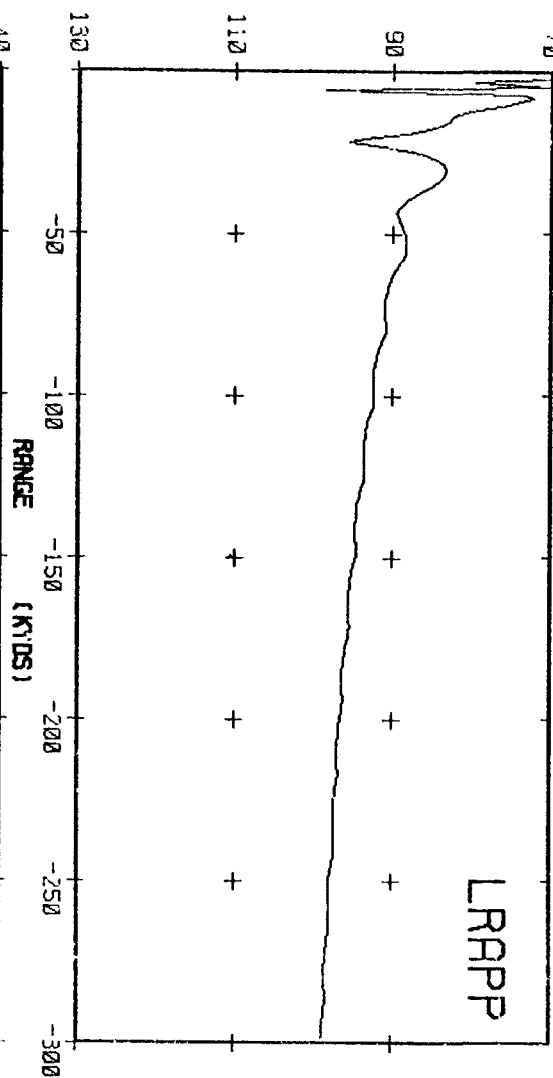


AREA 38 SUMMER

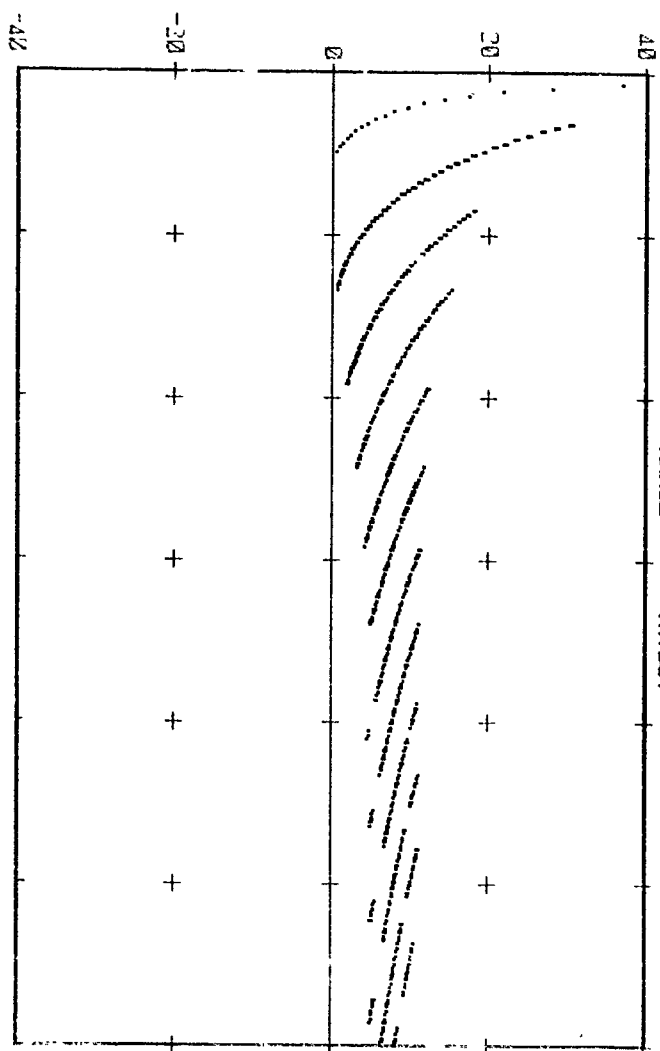
S 233 R 9842 F 50

1450 M/S 1500 1550

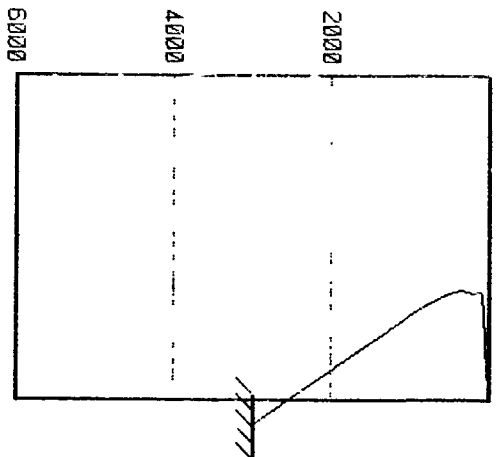
DB LOSS



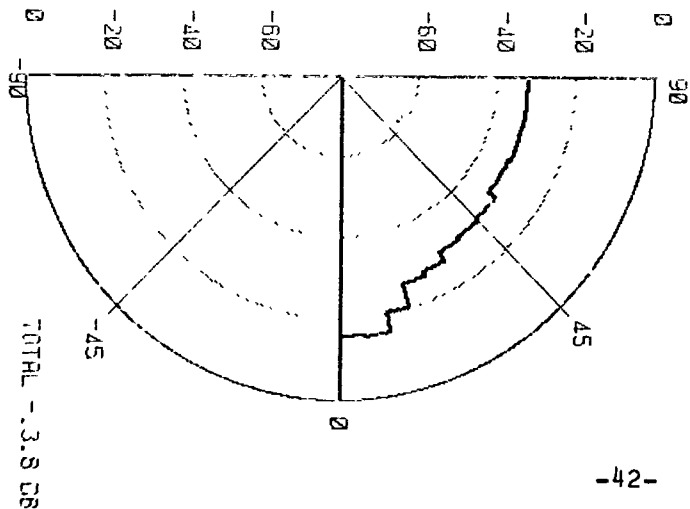
ARRIVAL ANGLE

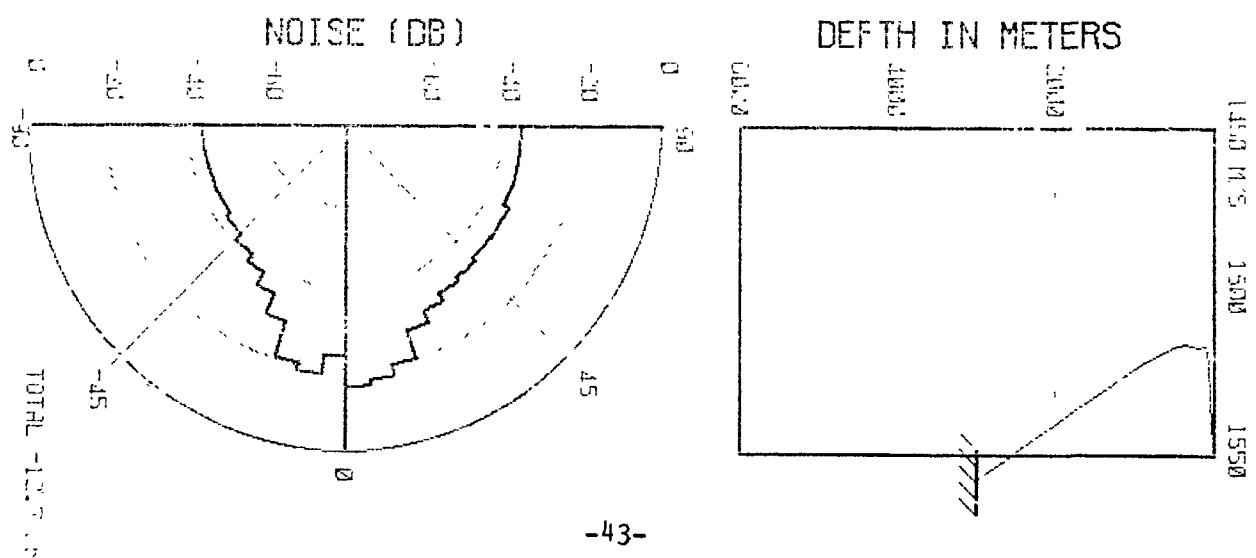
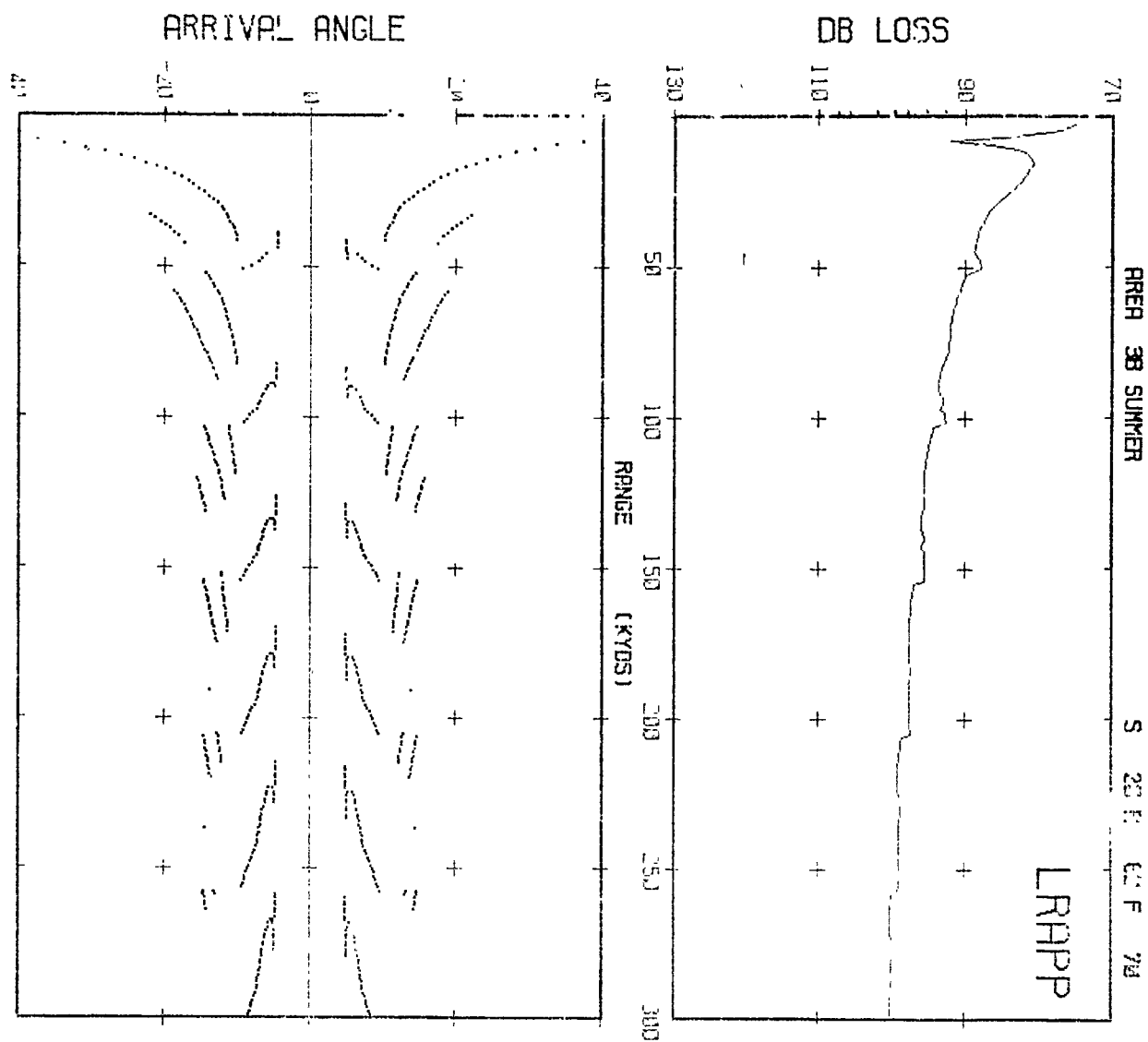


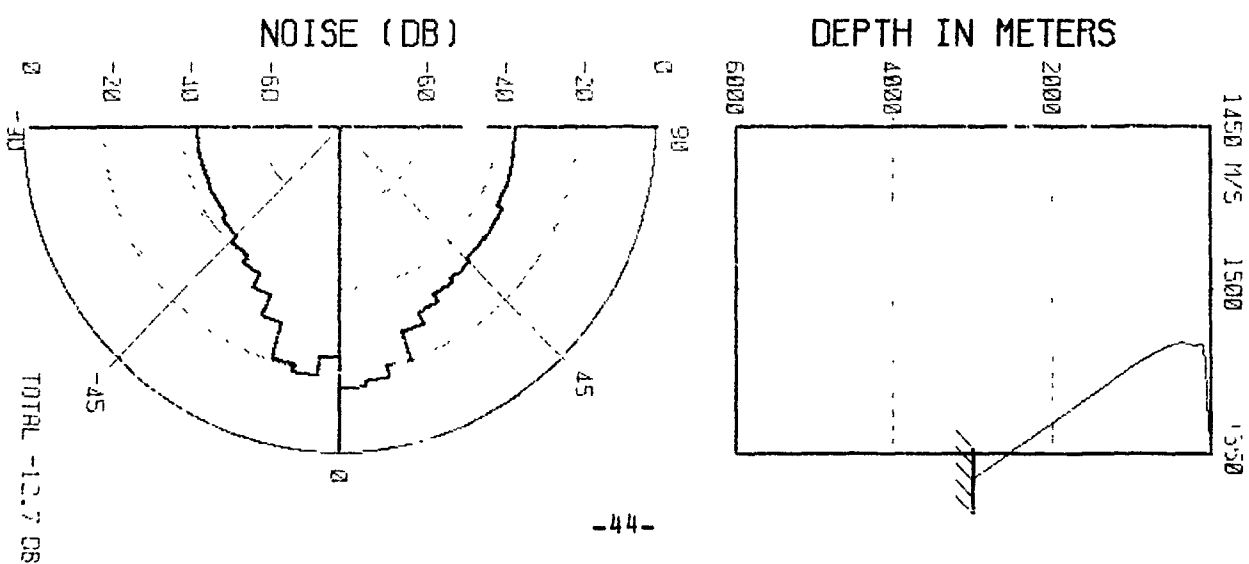
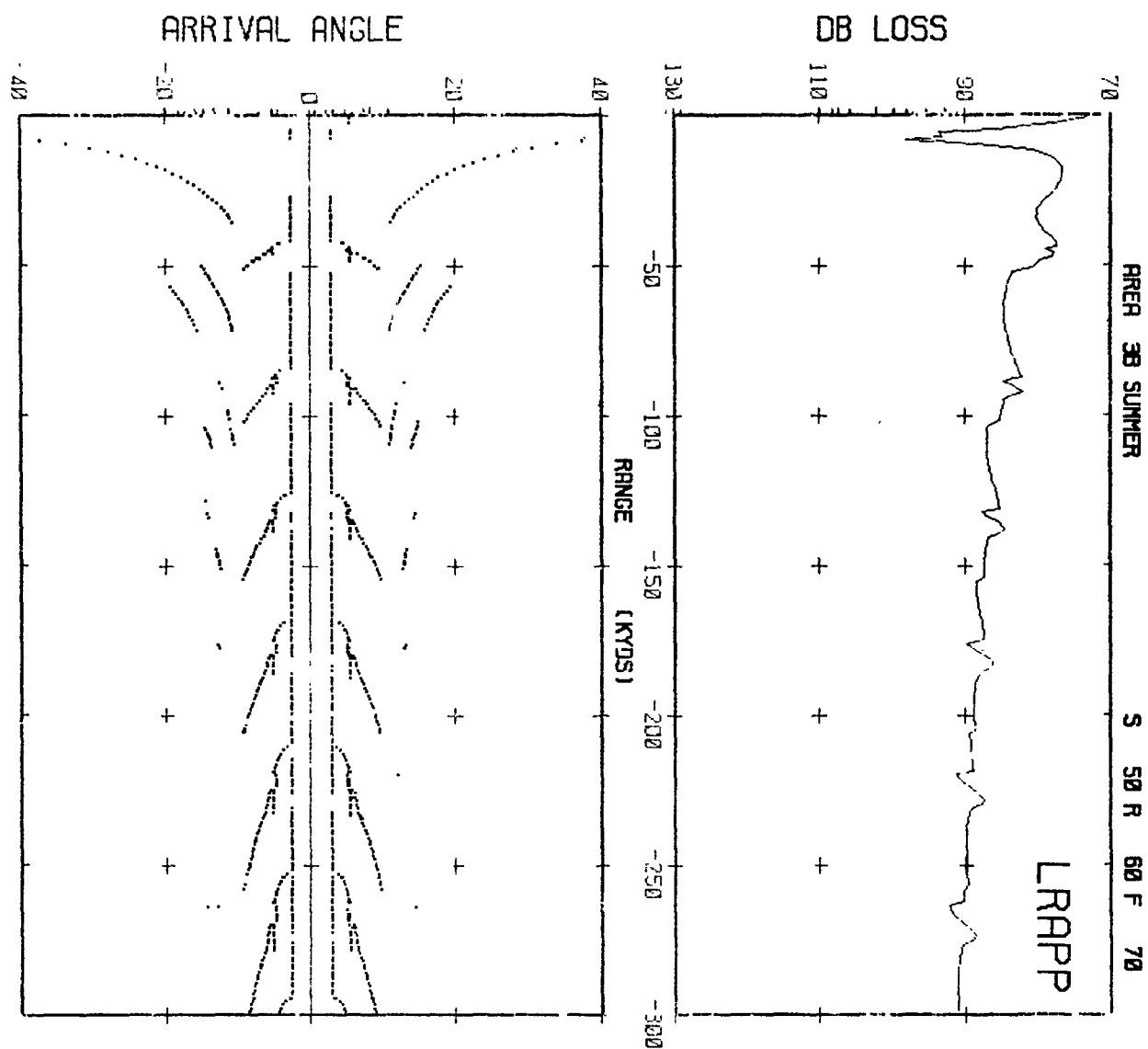
DEPTH IN METERS



NOISE (DB)





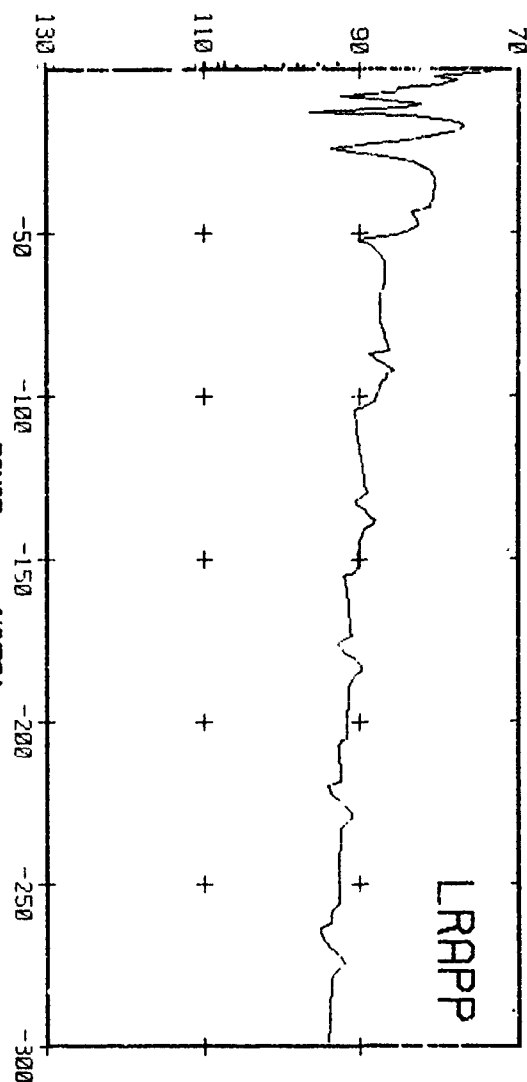


AREA 3B SUMMER

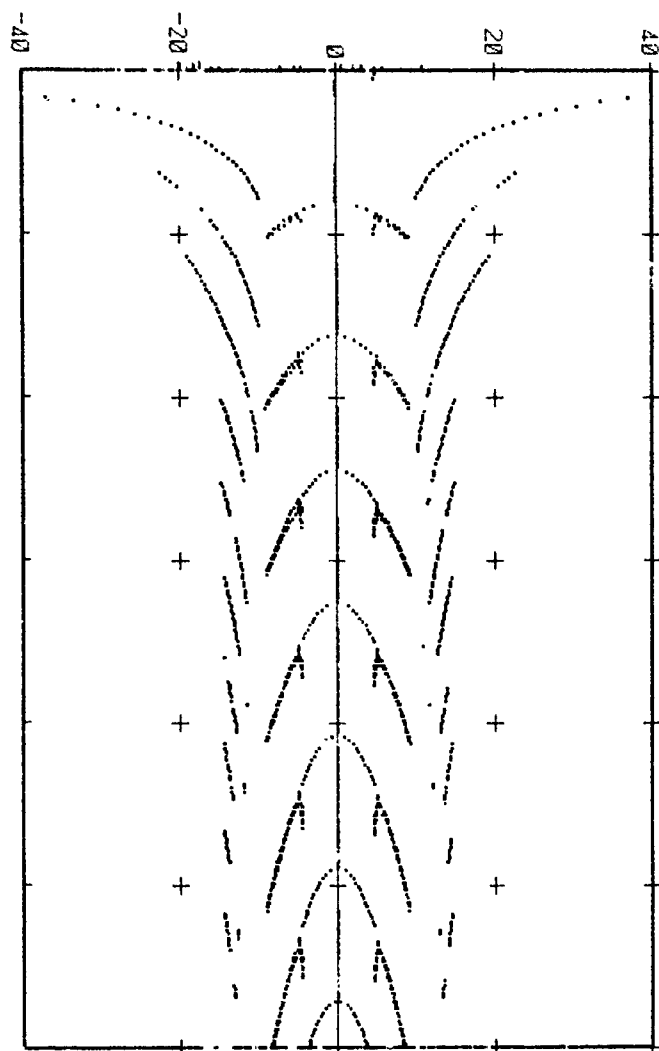
S 233 R 60 F 70

LRAPP

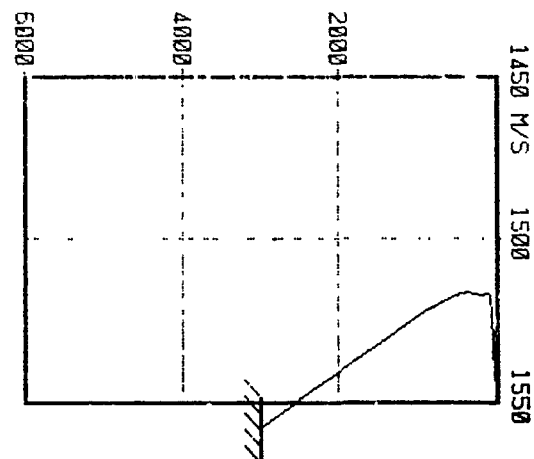
DB LOSS



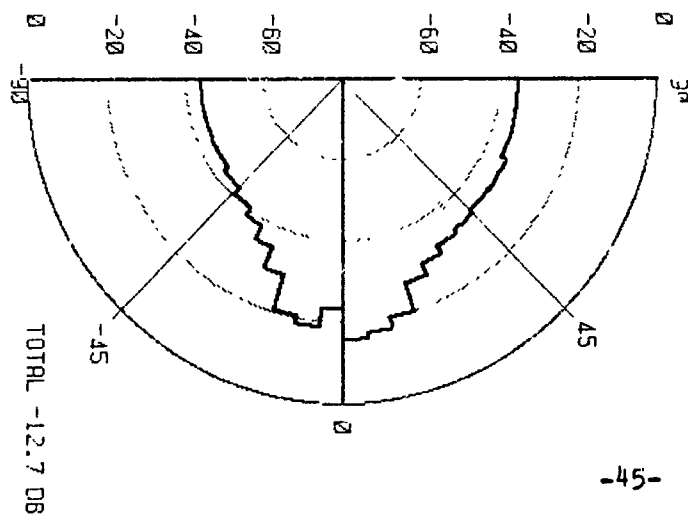
ARRIVAL ANGLE

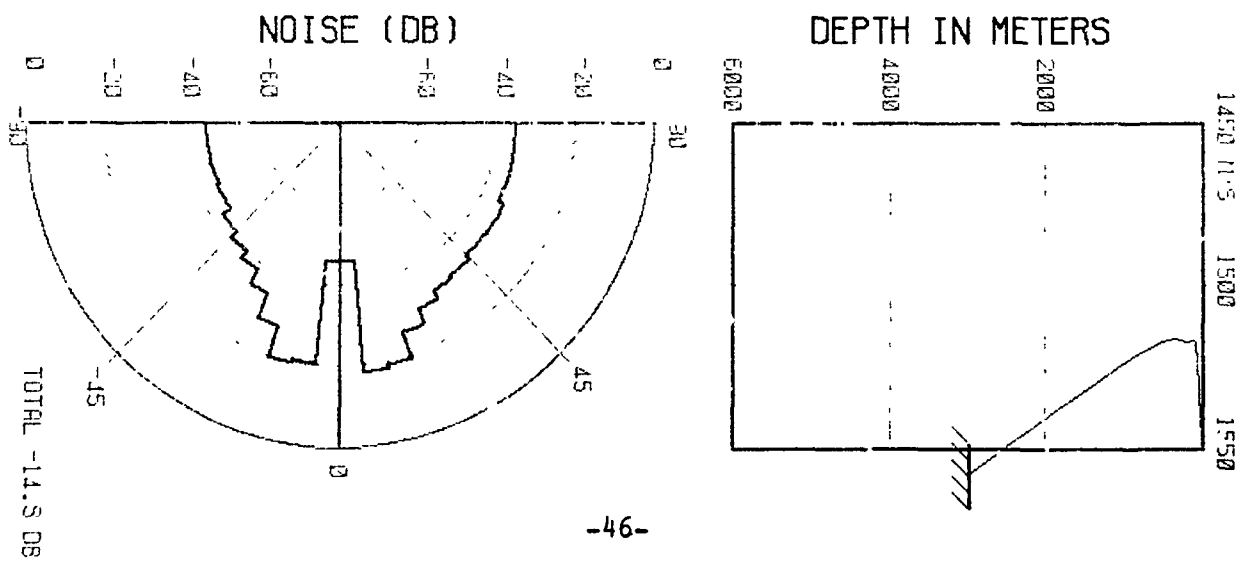
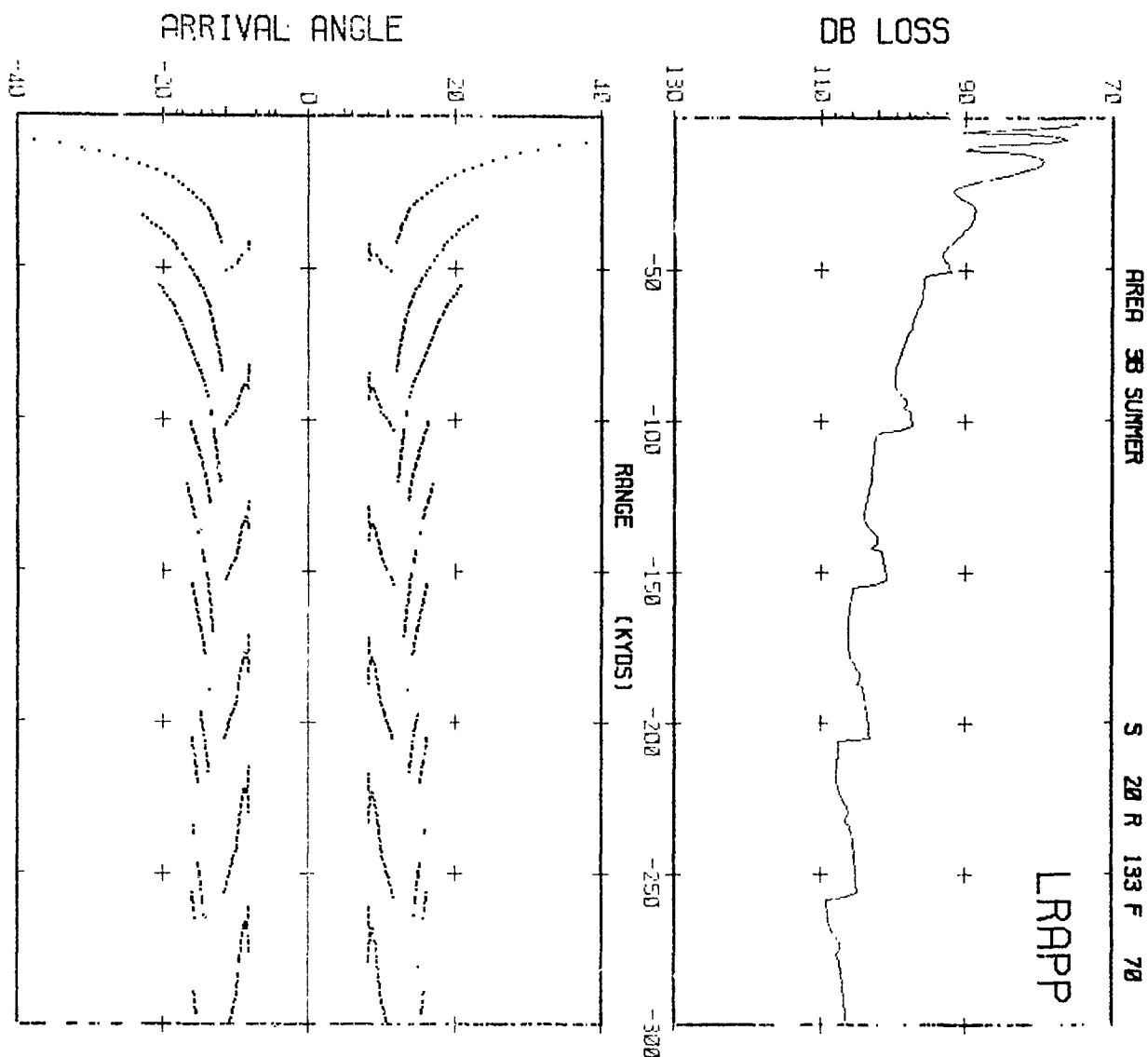


DEPTH IN METERS



NOISE (DB)



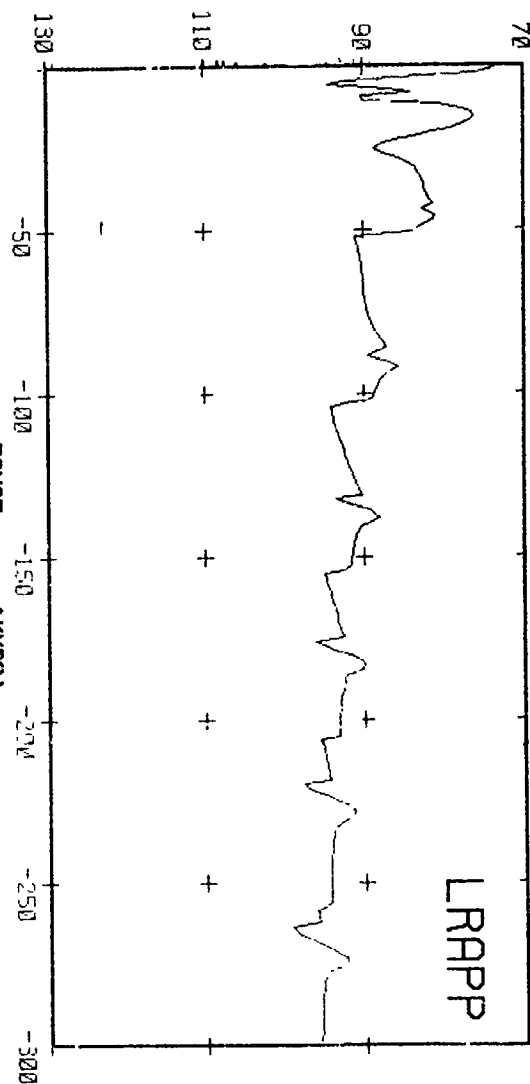


AREA 3B SUMMER

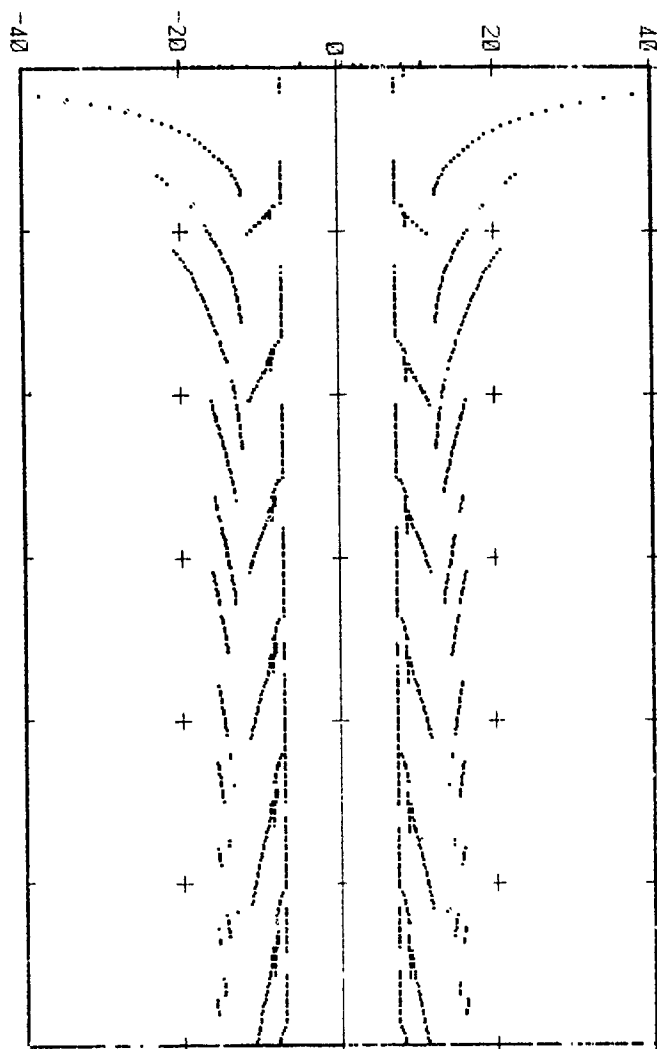
S 50 R 133 F 70

LRAPP

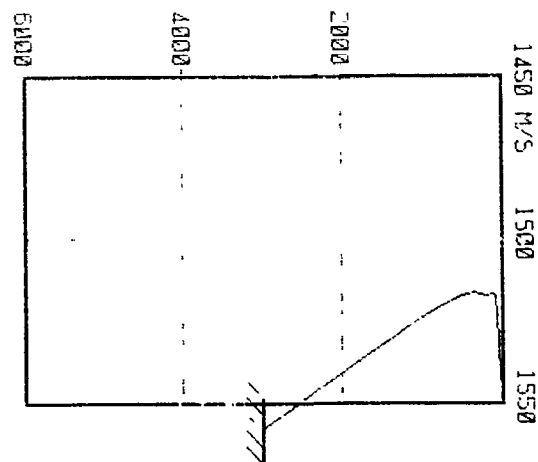
DB LOSS



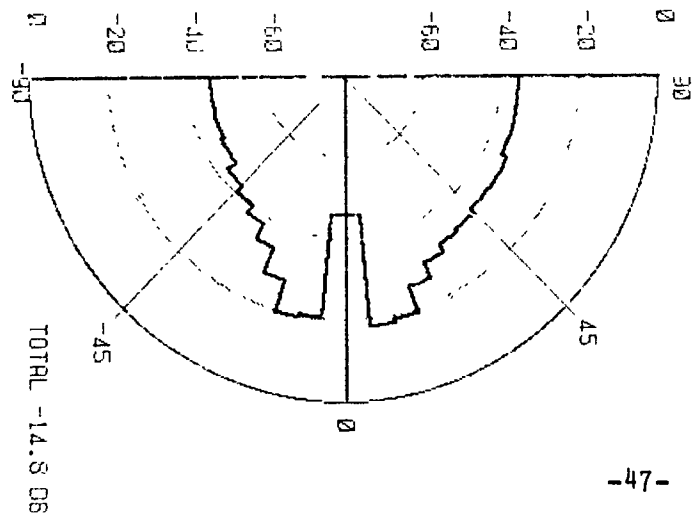
ARRIVAL ANGLE

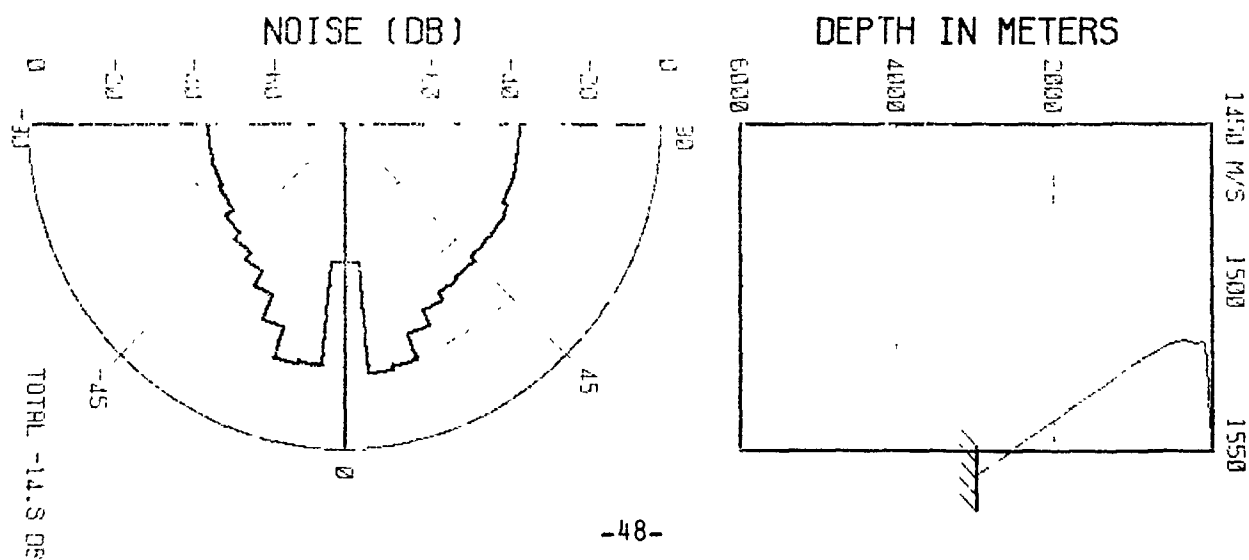
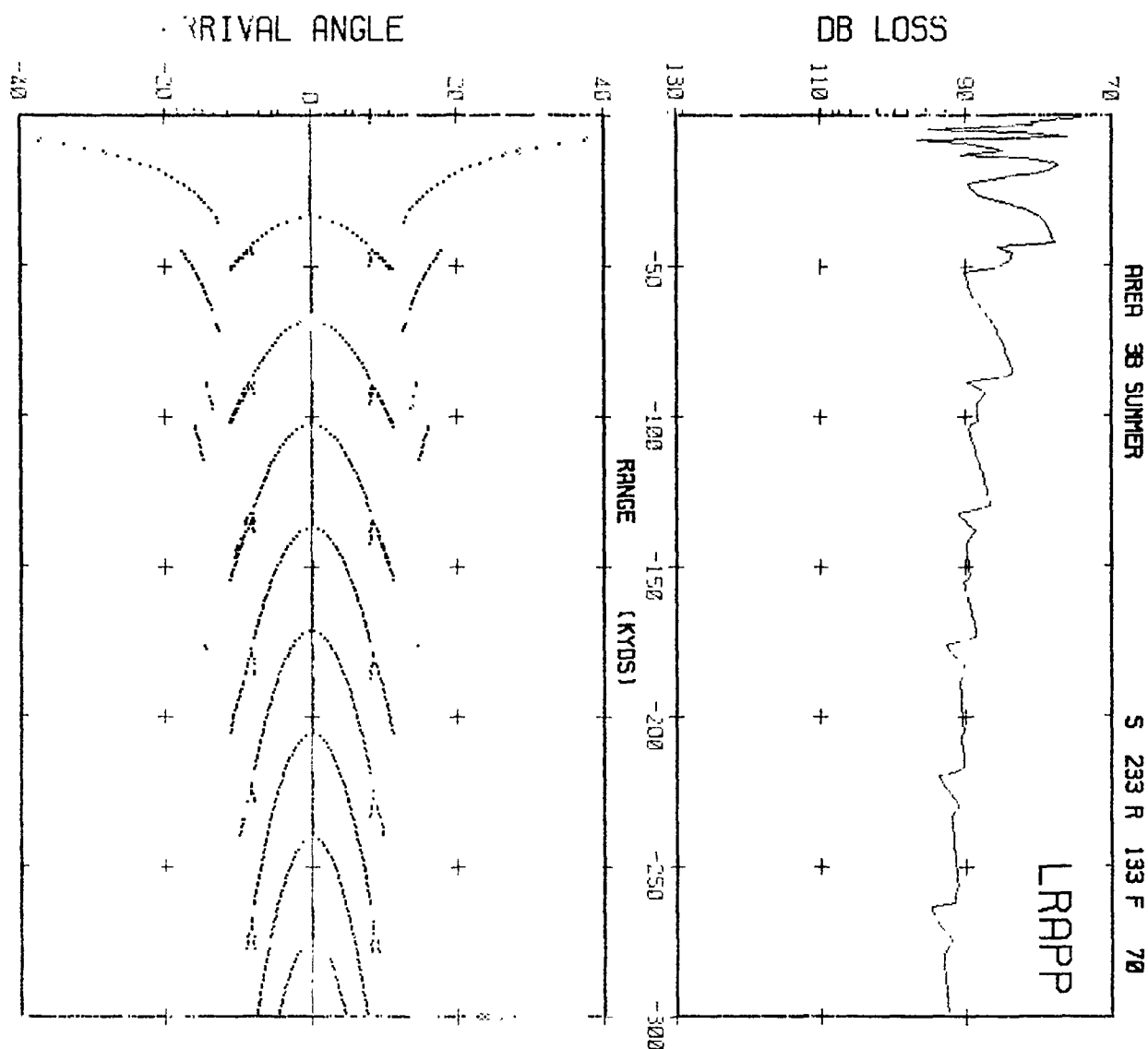


DEPTH IN METERS



NOISE (DB)



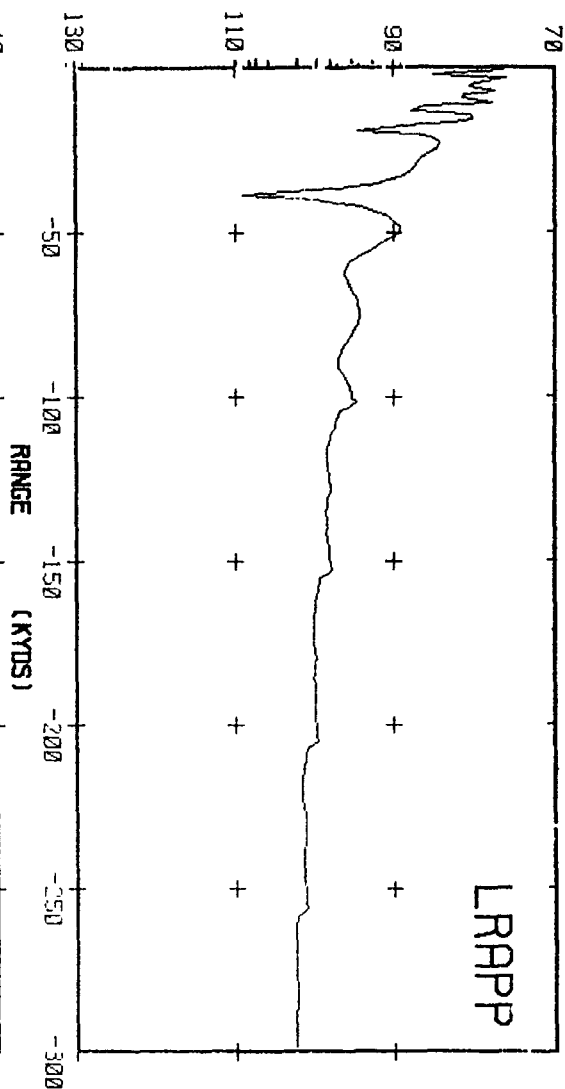


ARER 38 SUMMER

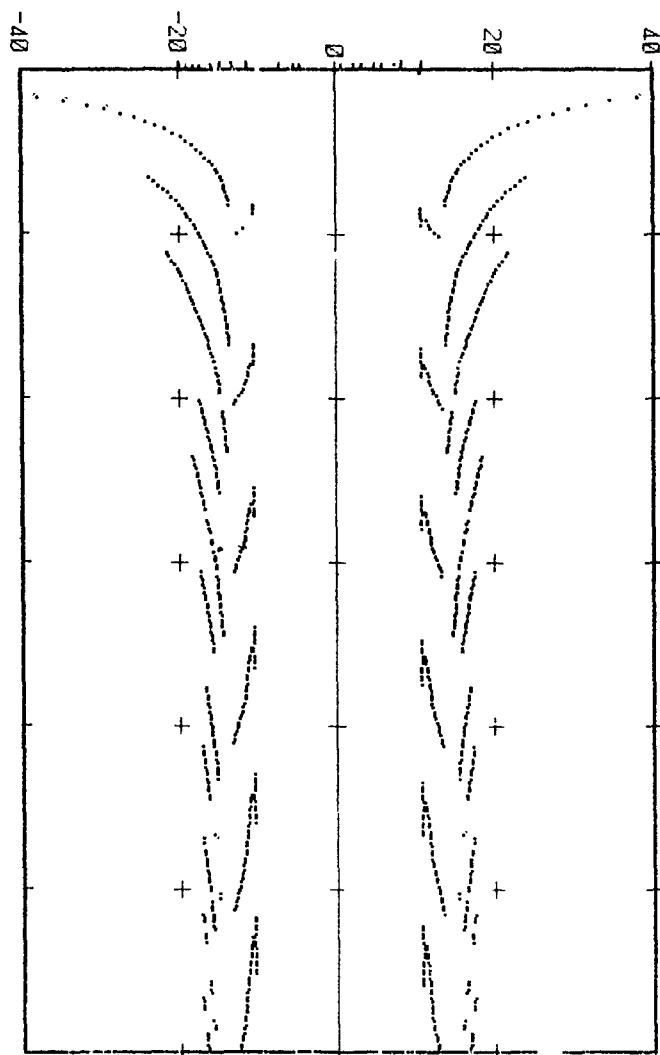
S 20 R 300 F 70

LRAPP

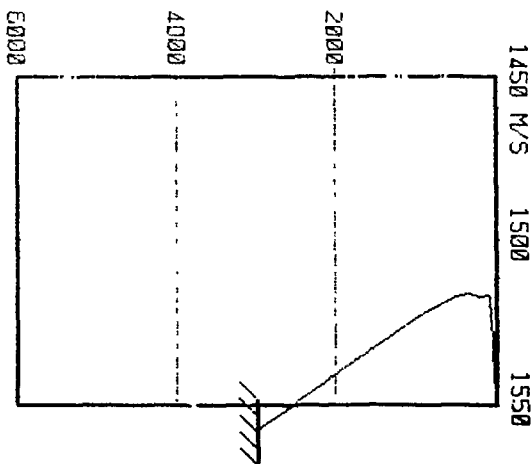
DB LOSS



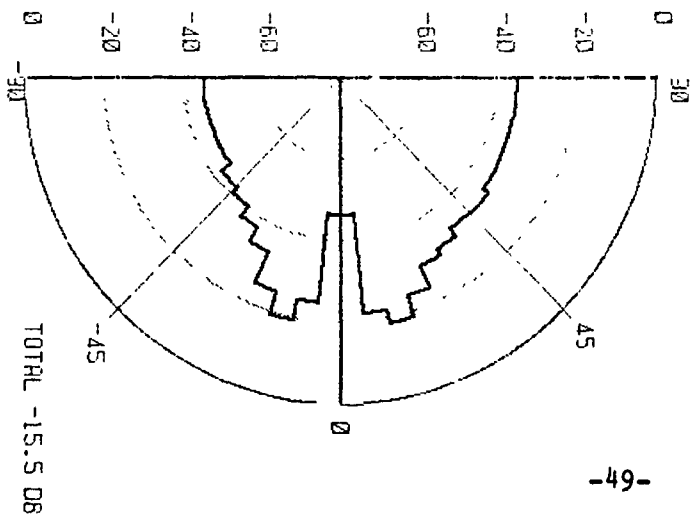
ARRIVAL ANGLE



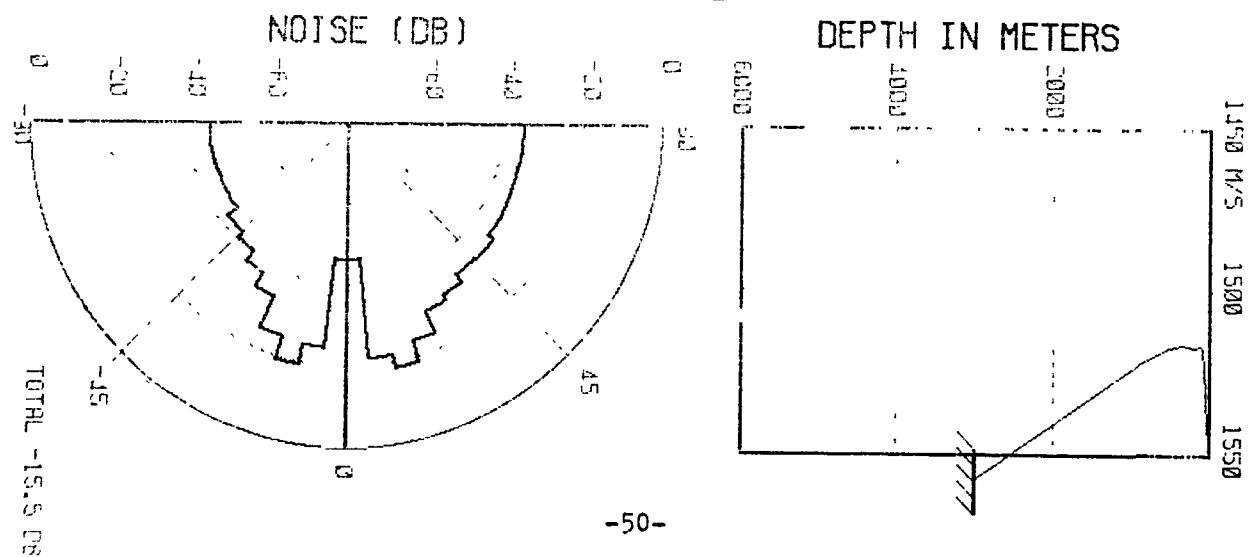
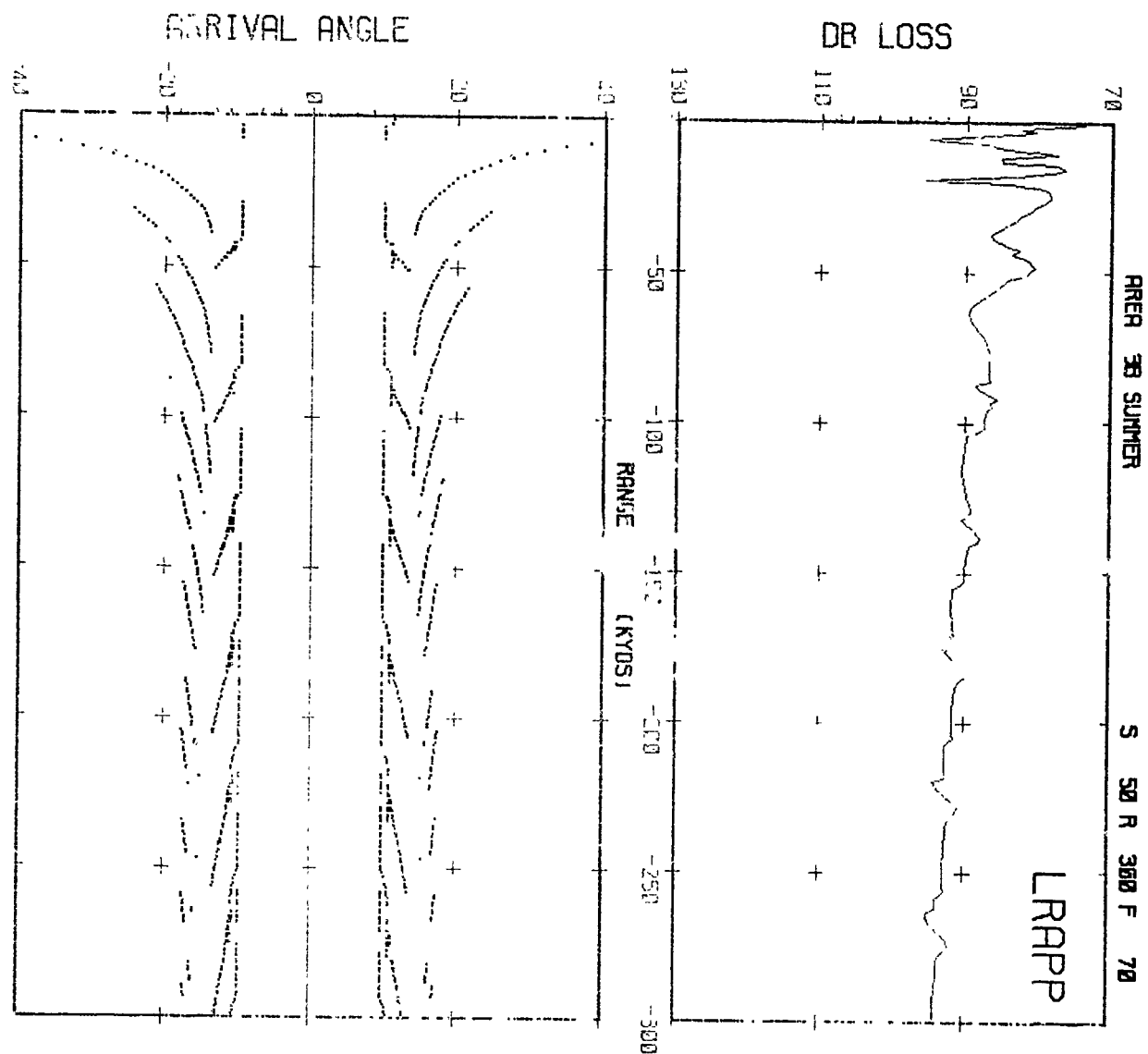
DEPTH IN METERS

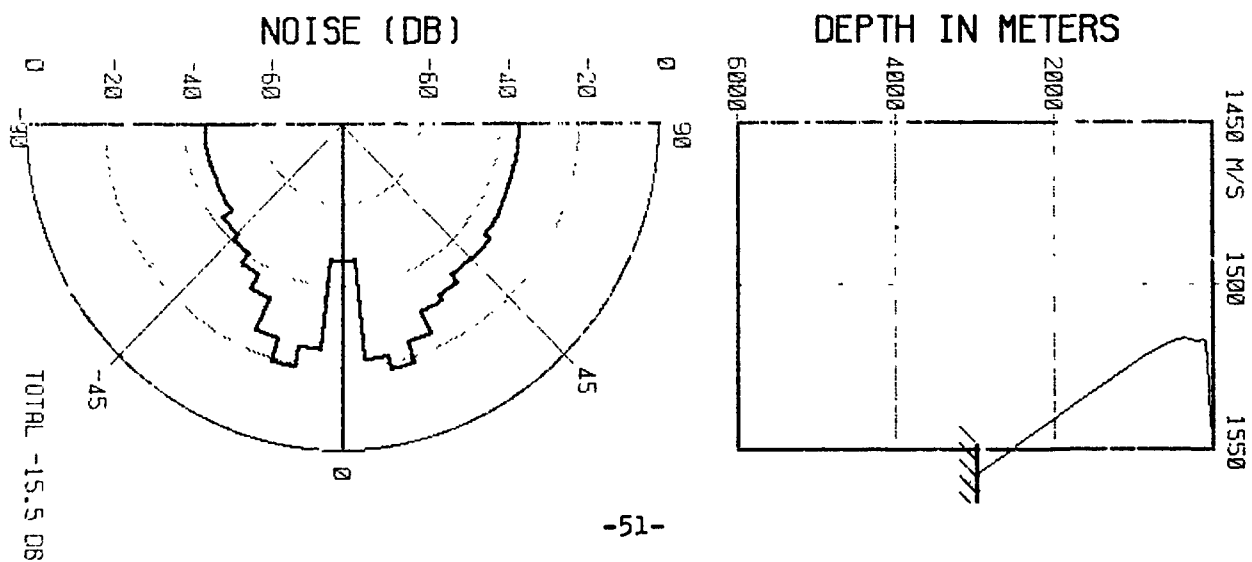
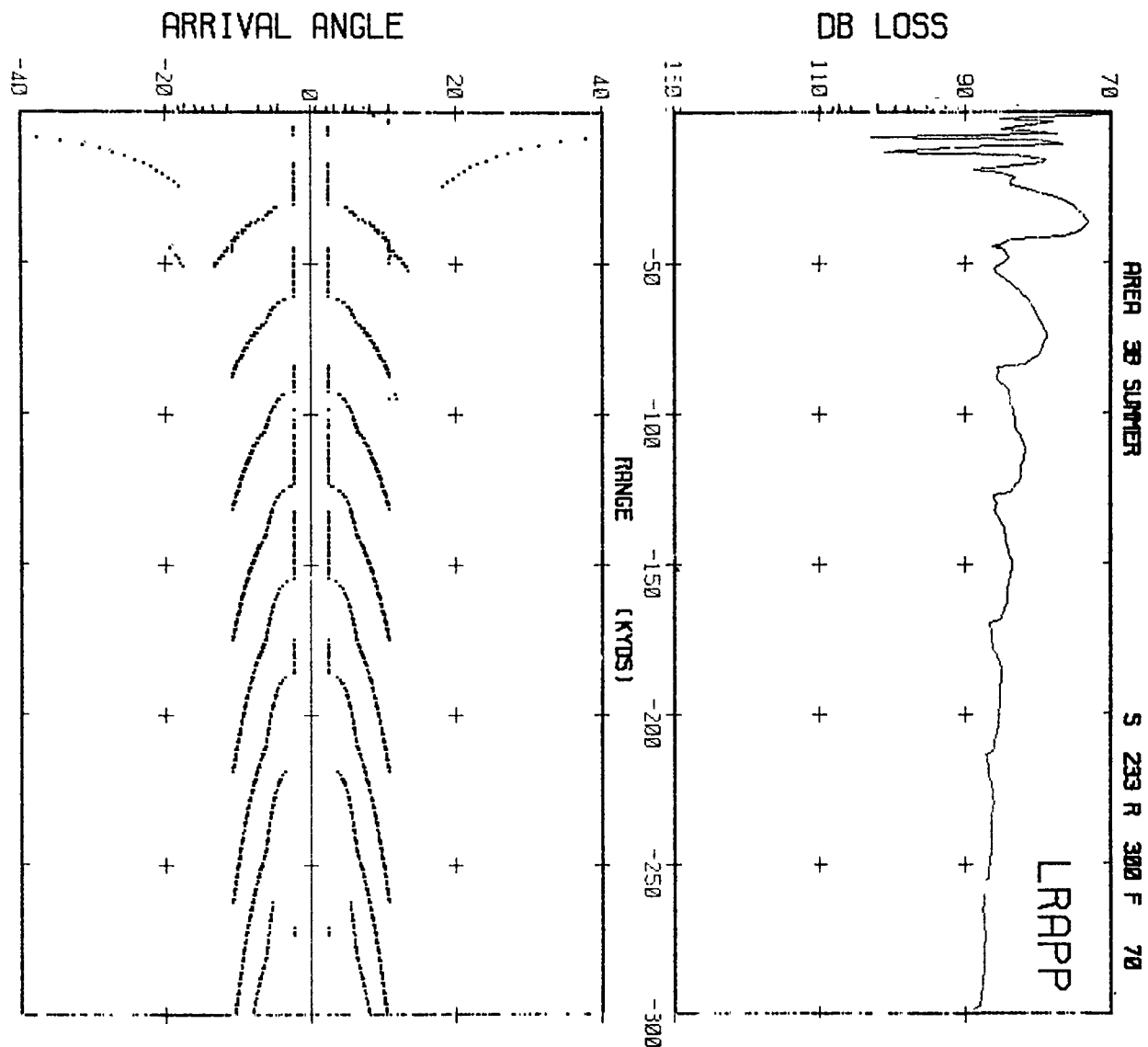


NOISE (DB)







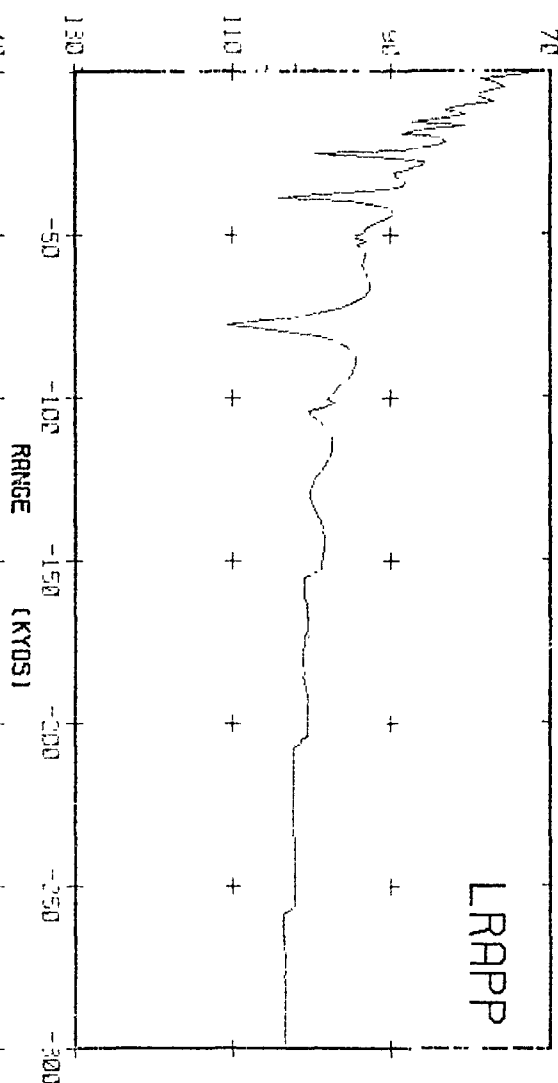


AREA 38 SUMMER

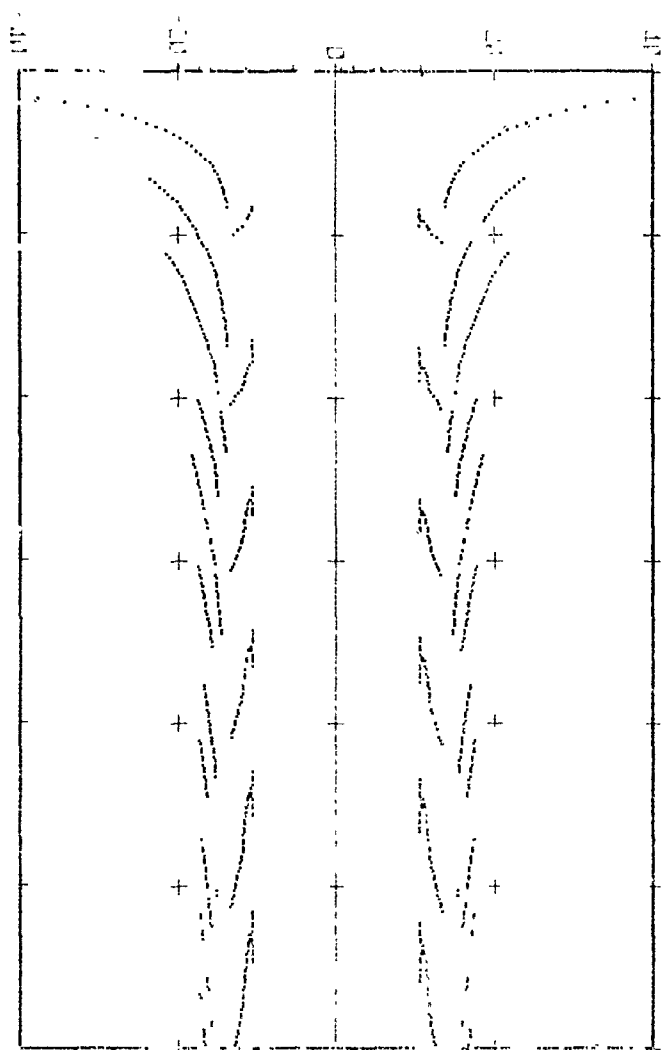
S 20 R 600 F 70

1450 M/S 1500 1550

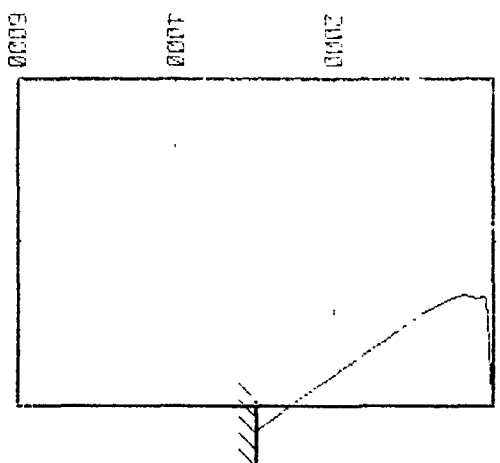
DB LOSS



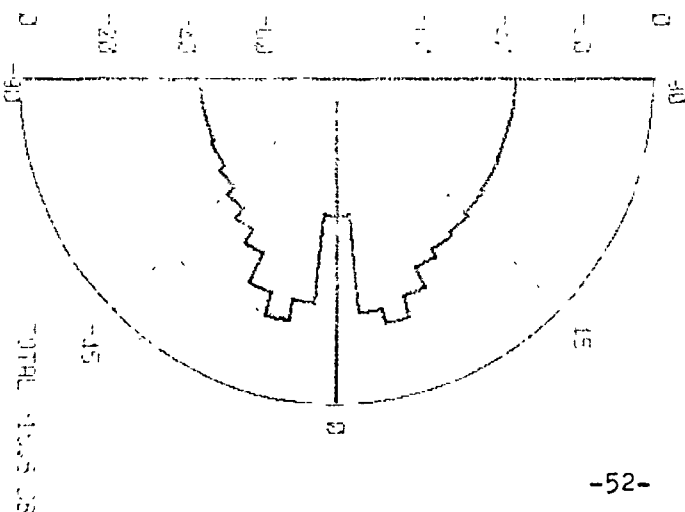
ARRIVAL ANGLE



DEPTH IN METERS



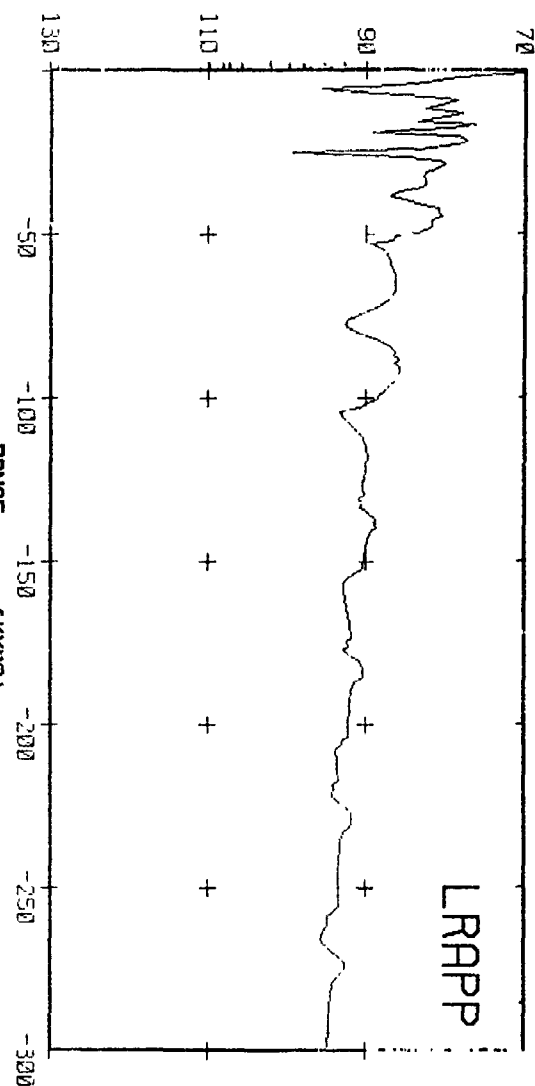
NOISE (DB)



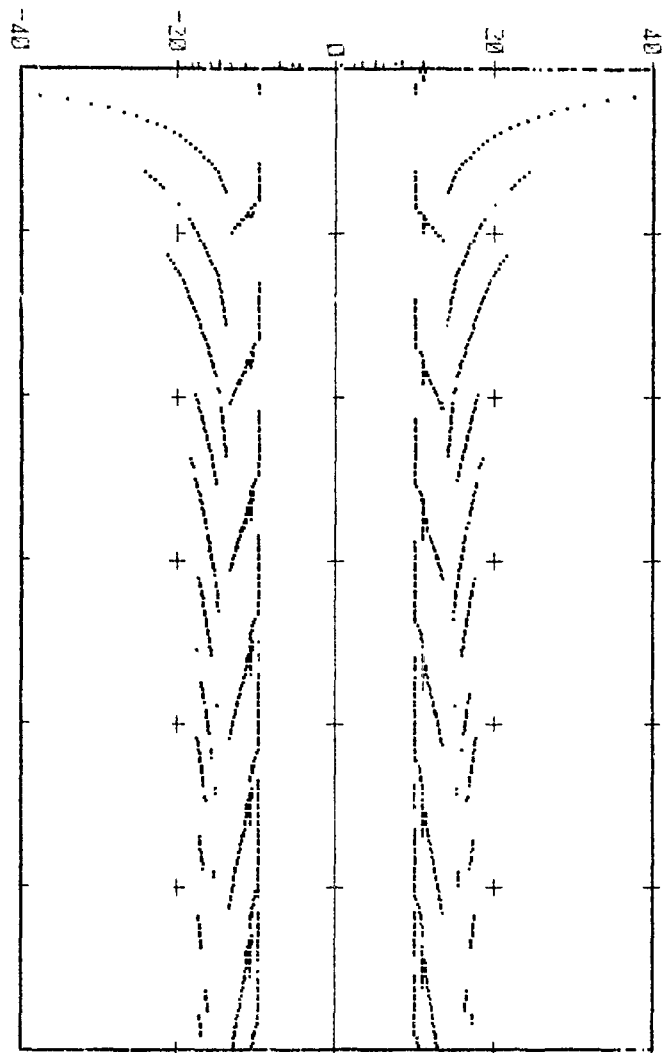
AREA 38 SUMMER

S 50 R 600 F 70

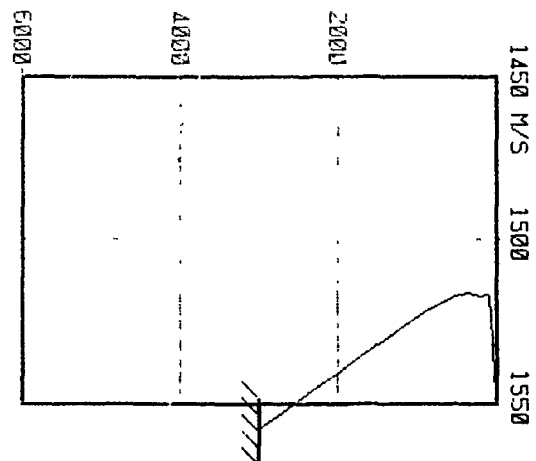
DB LOSS



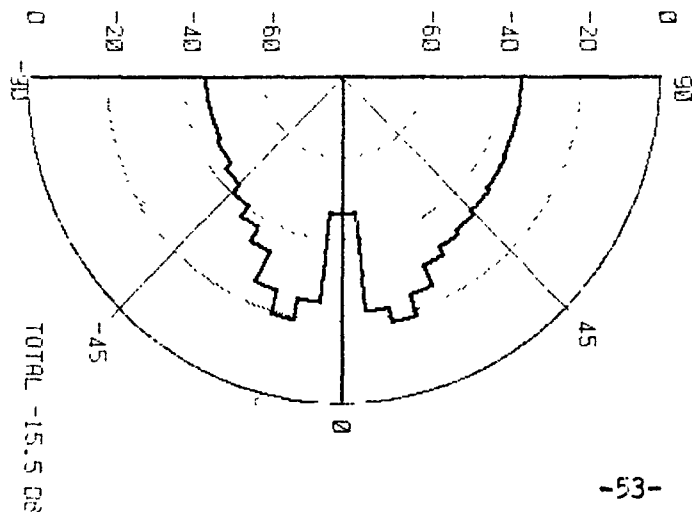
ARRIVAL ANGLE

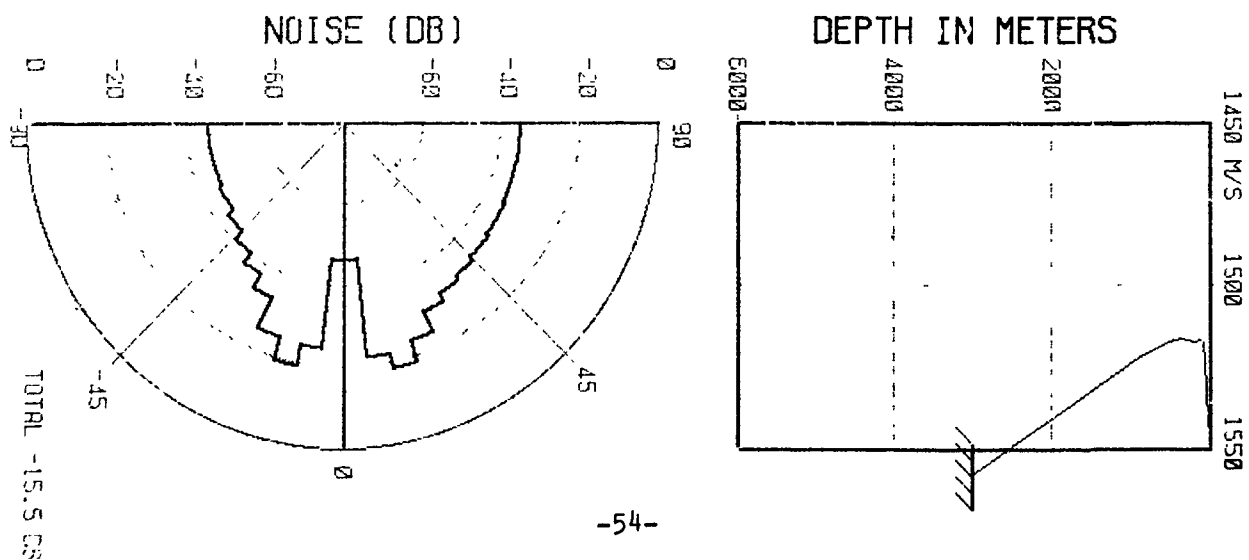
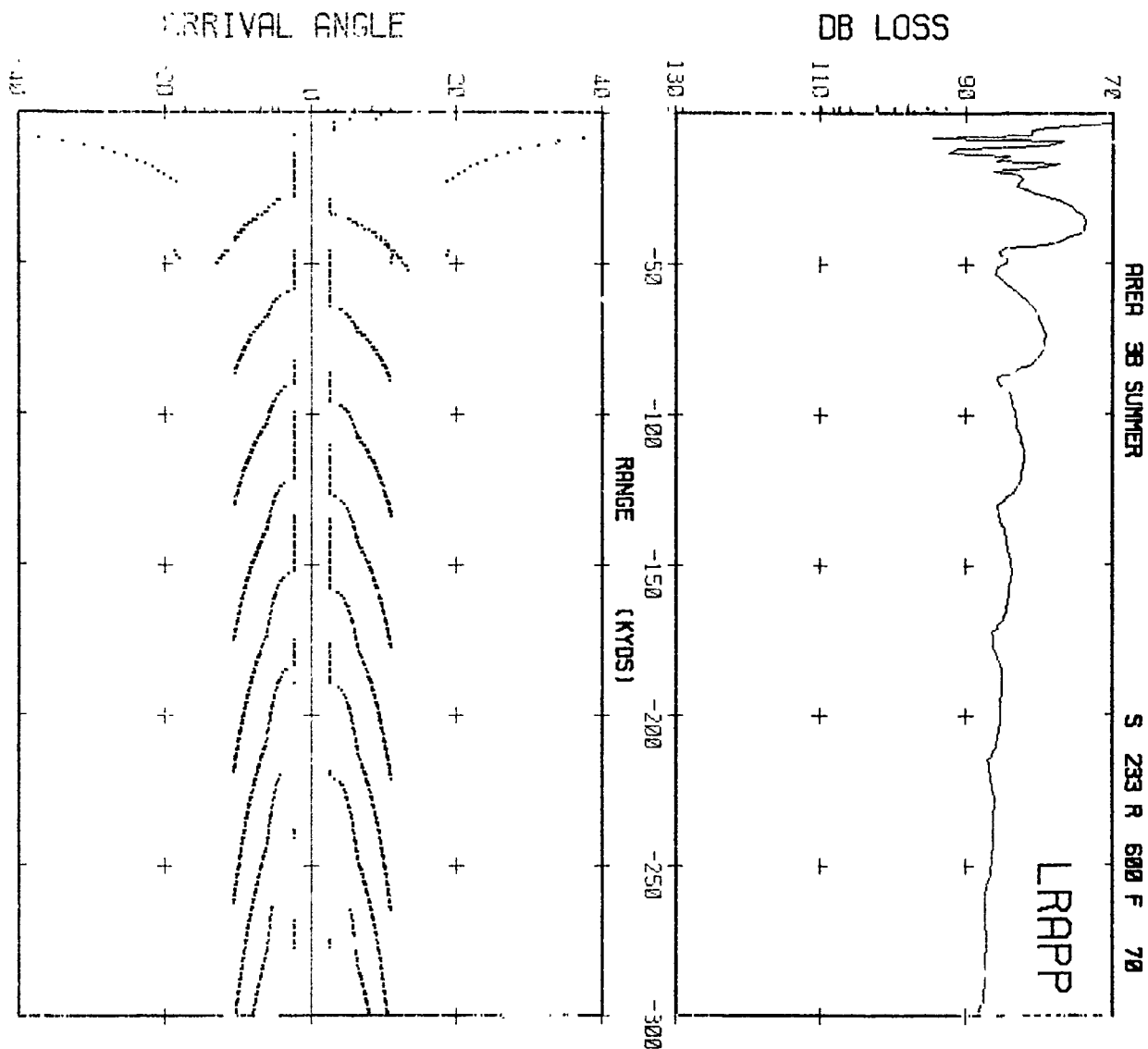


DEPTH IN METERS



NOISE (DB)



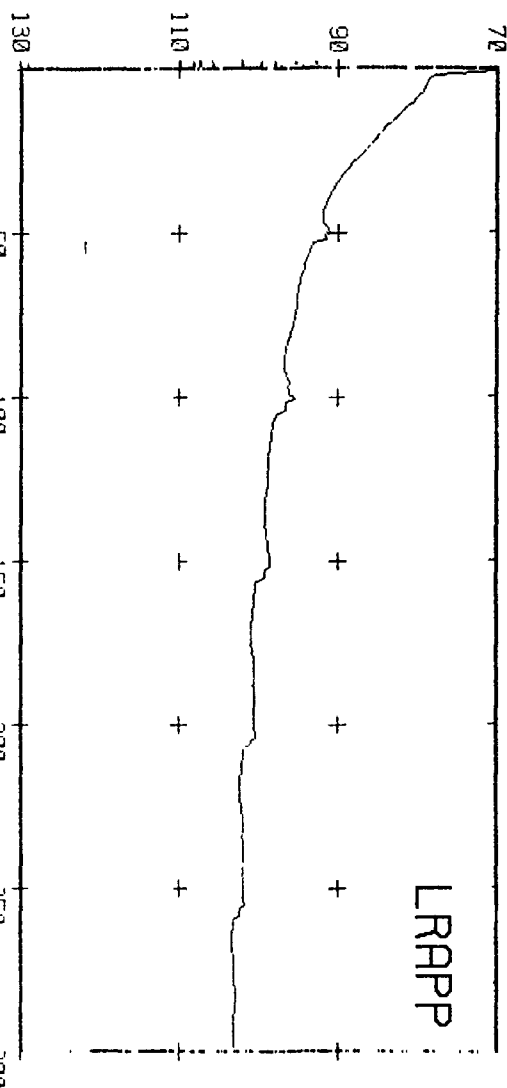


AREA 38 SUMMER

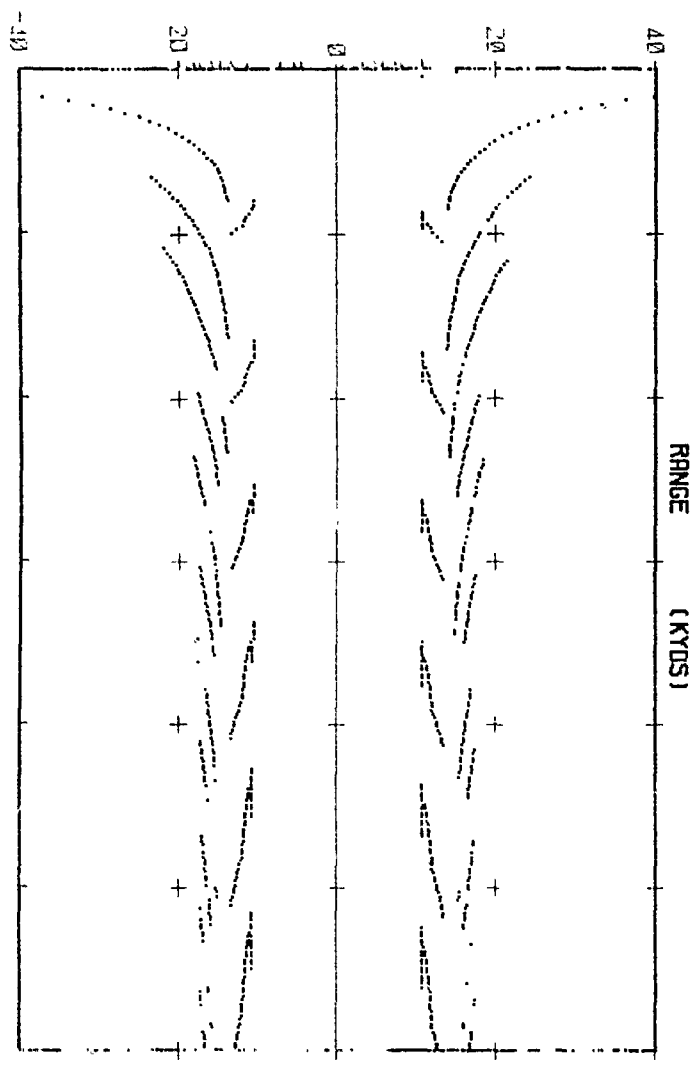
S 20 R 1000 F 70

LRAPP

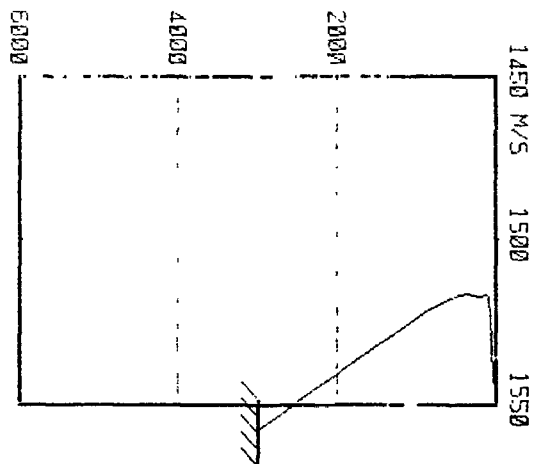
DB LOSS



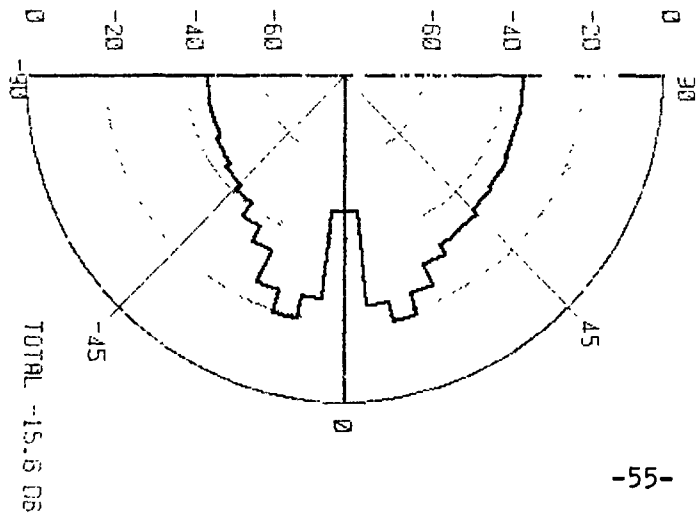
ARRIVAL ANGLE

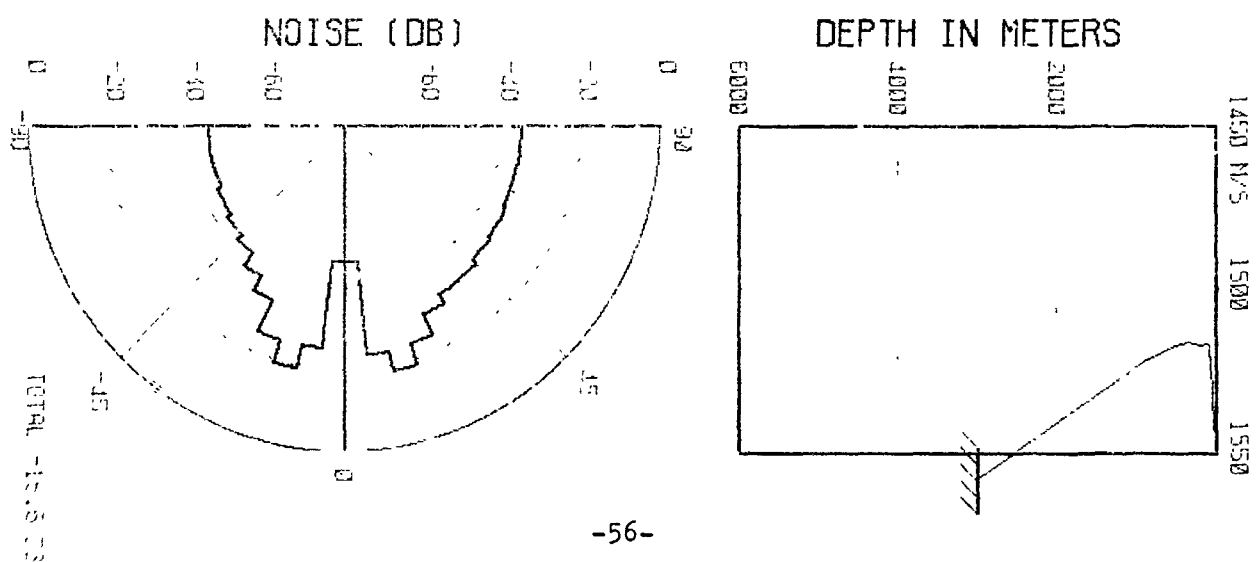
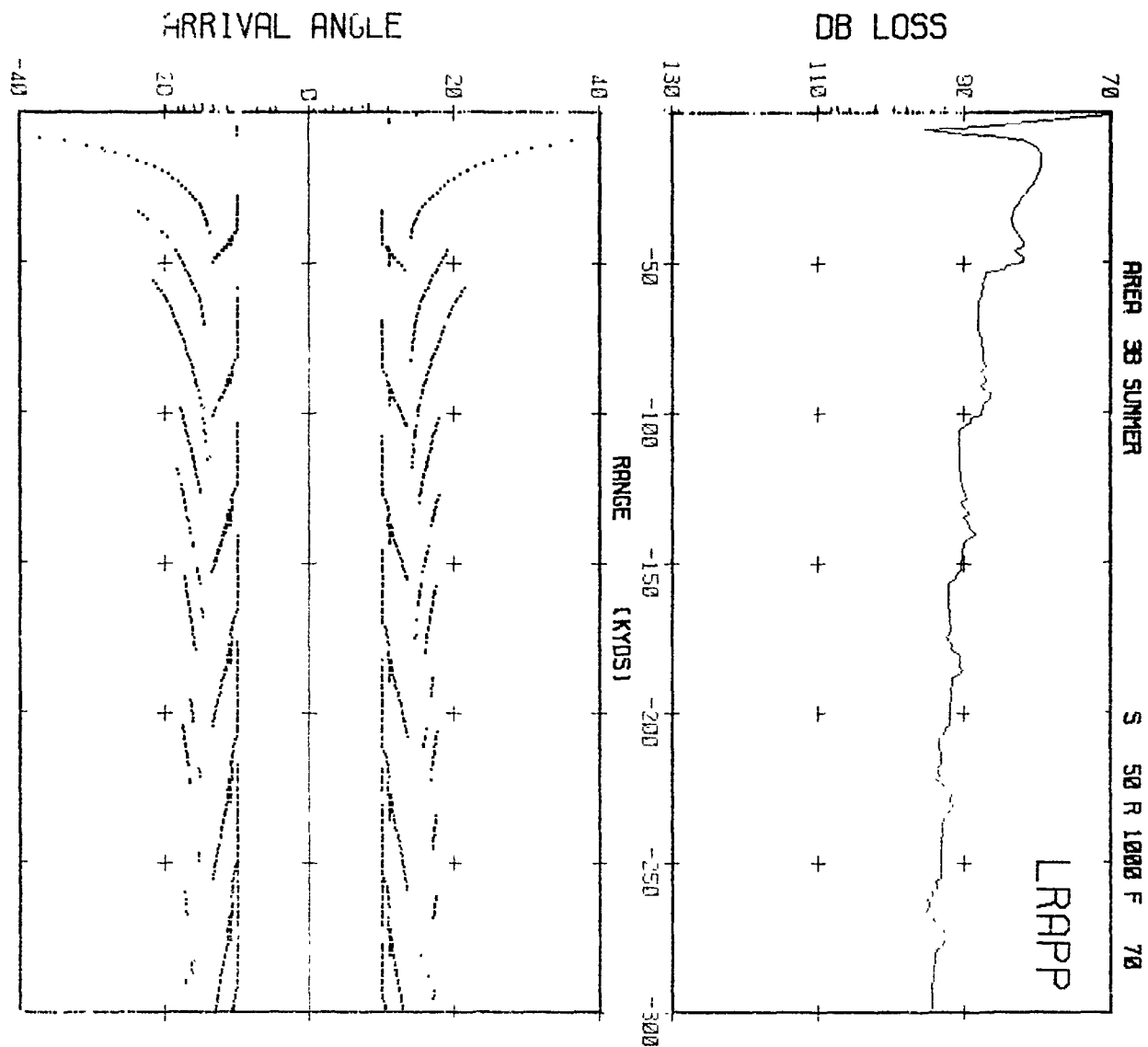


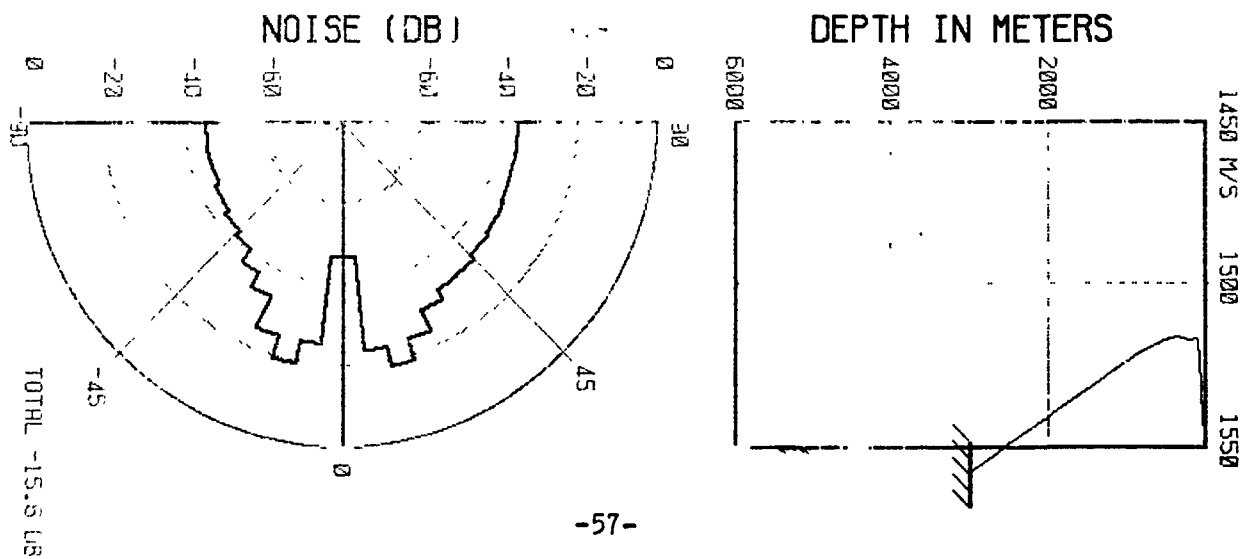
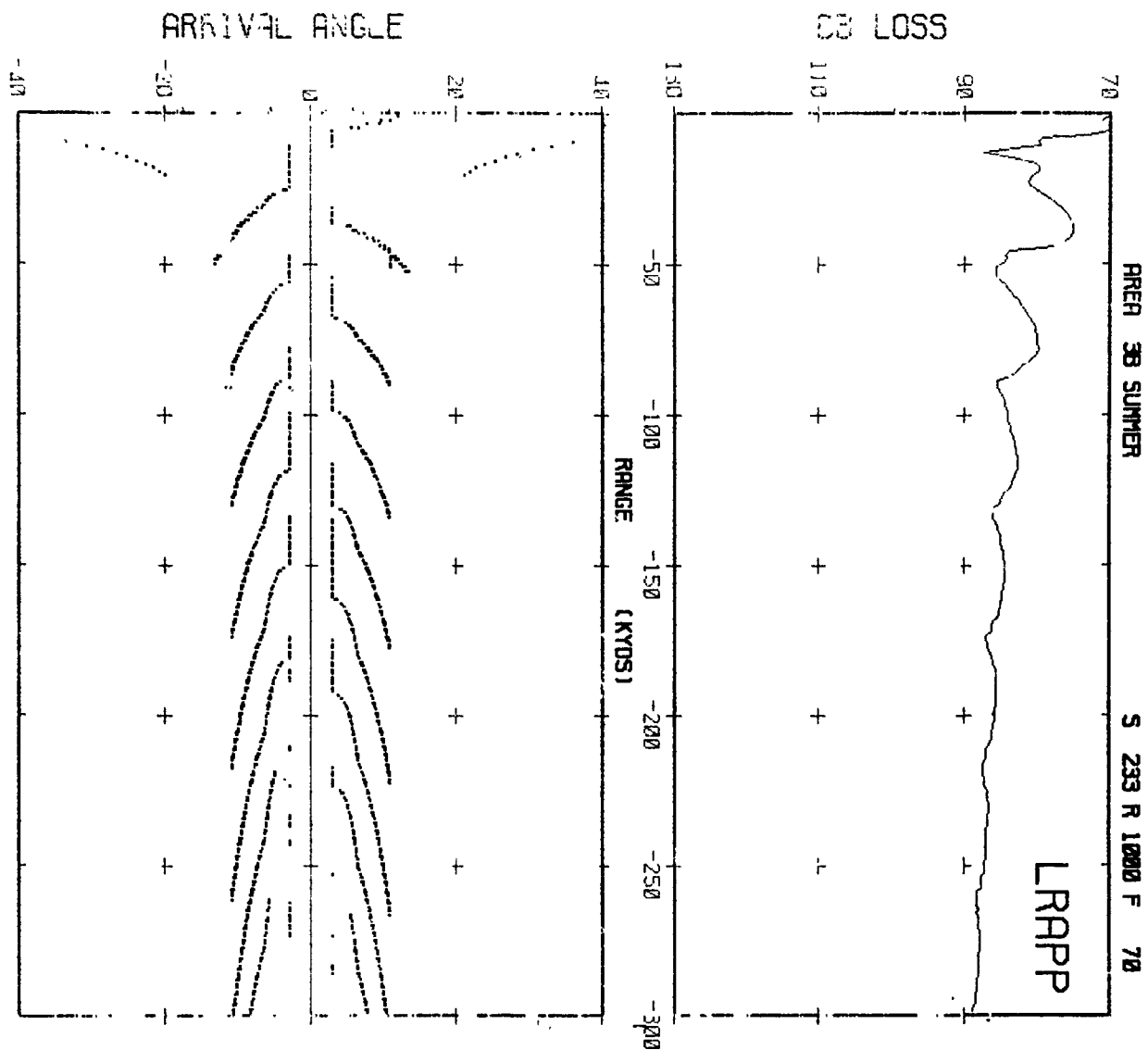
DEPTH IN METERS



NOISE (DB)







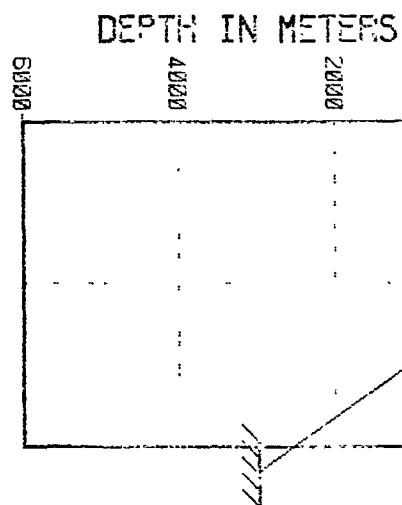
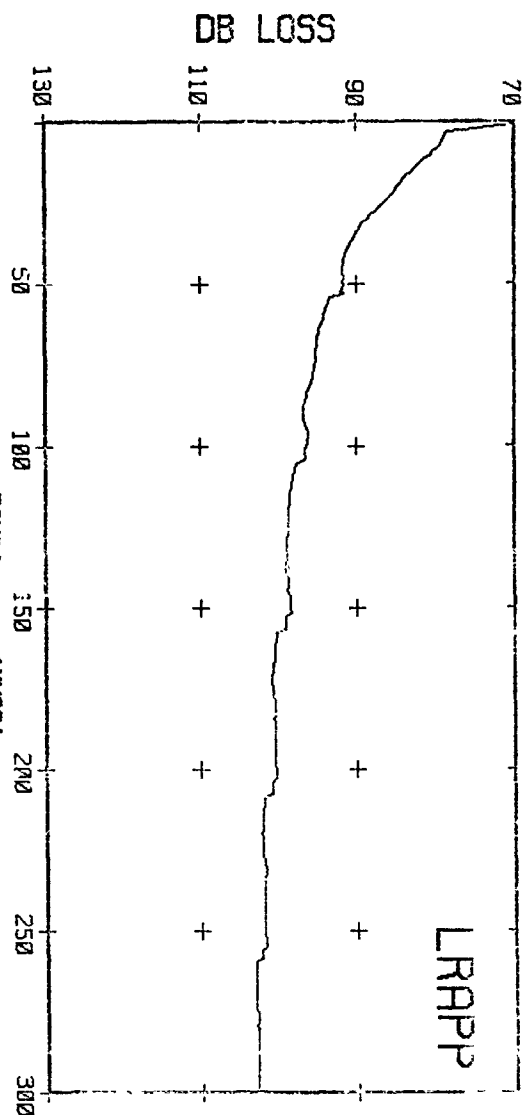


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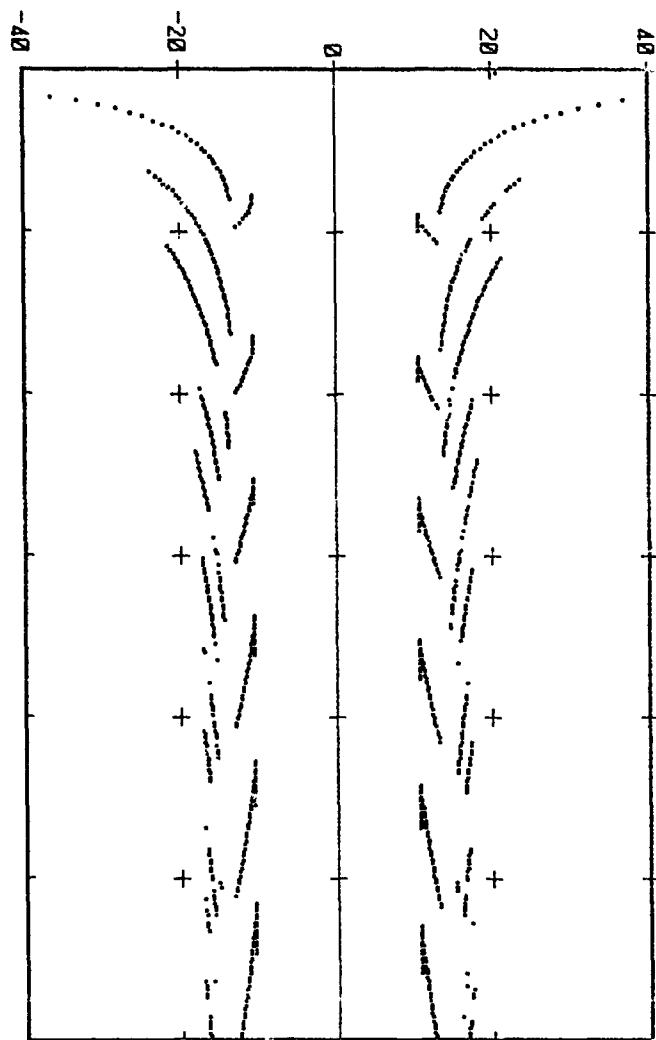
# PIPER 33 SUMMER

5 29 15 20 7

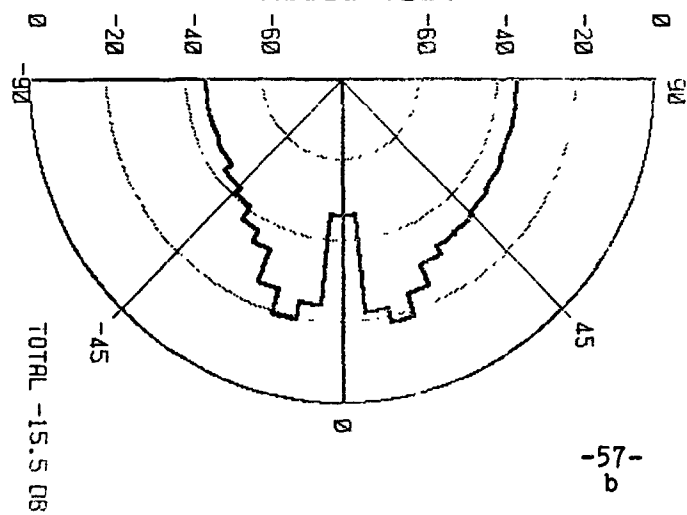
145M M/5 15.37 15.42

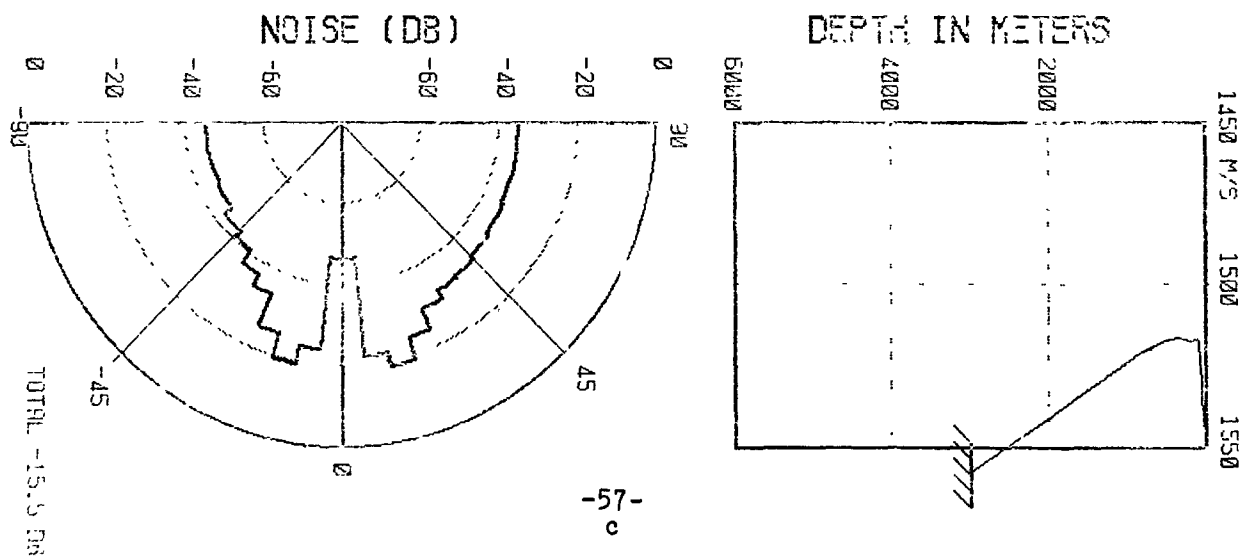
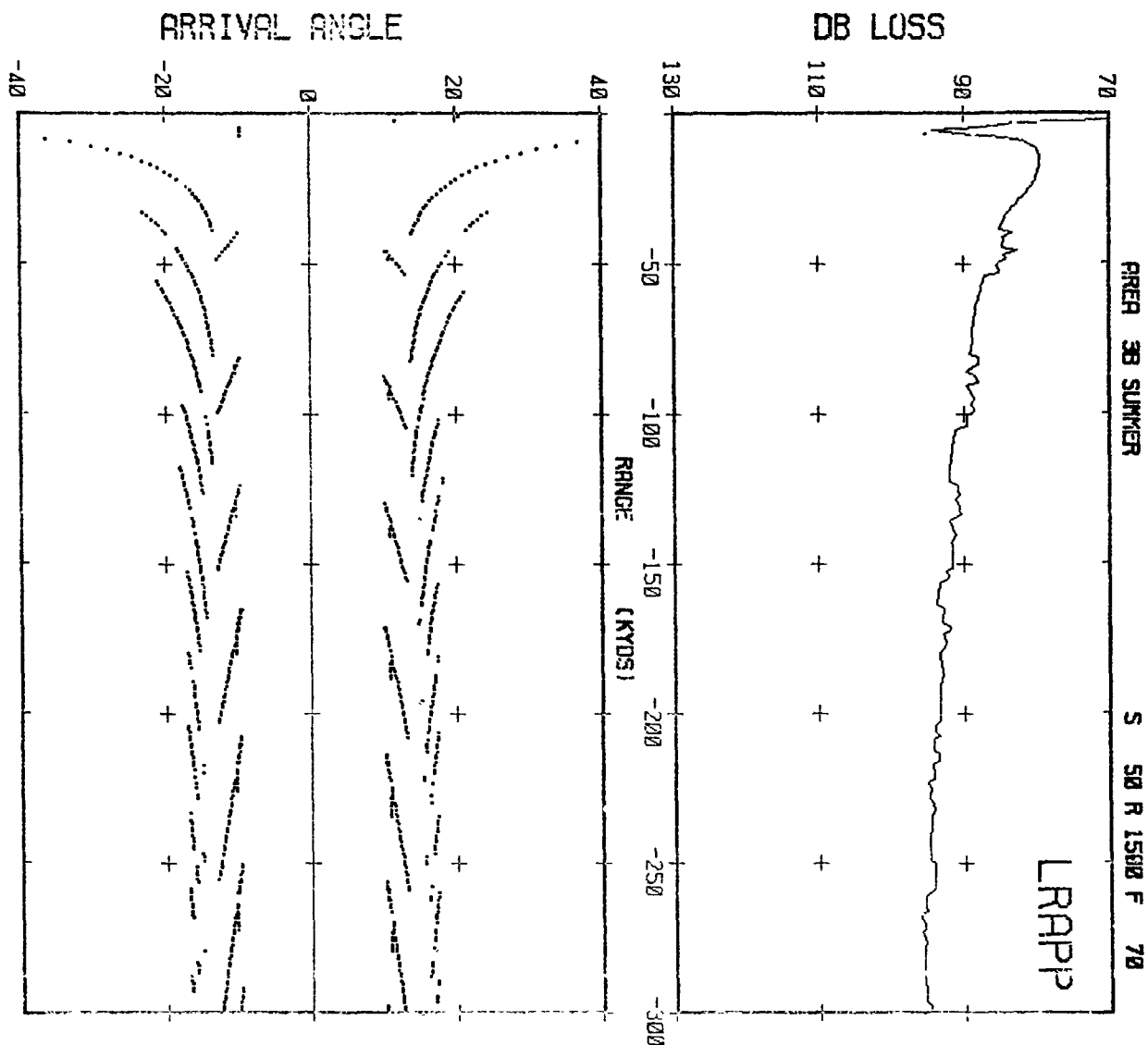


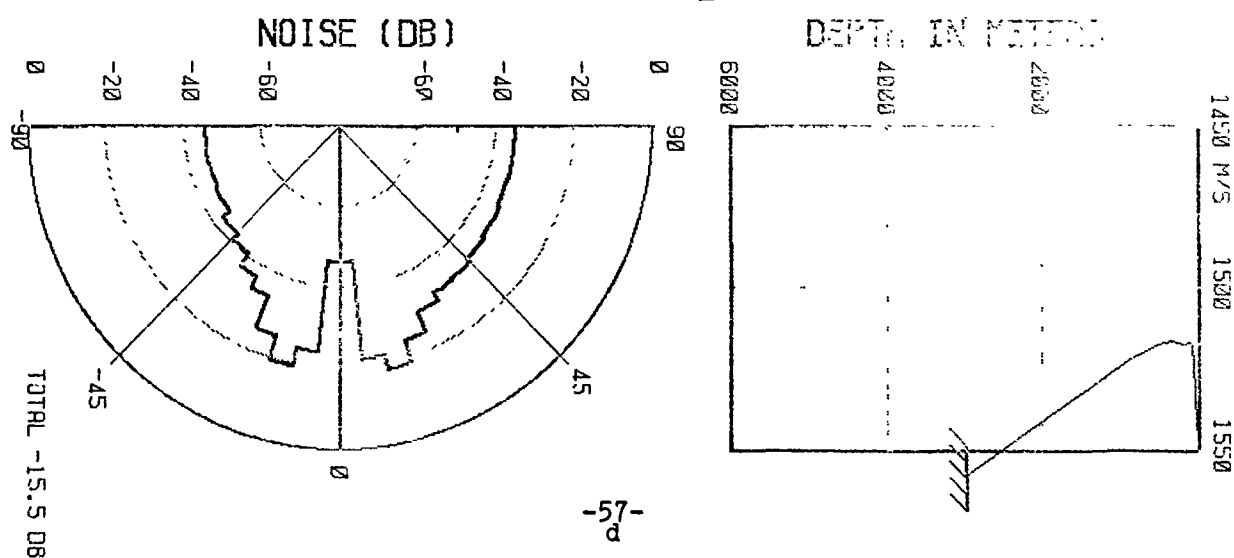
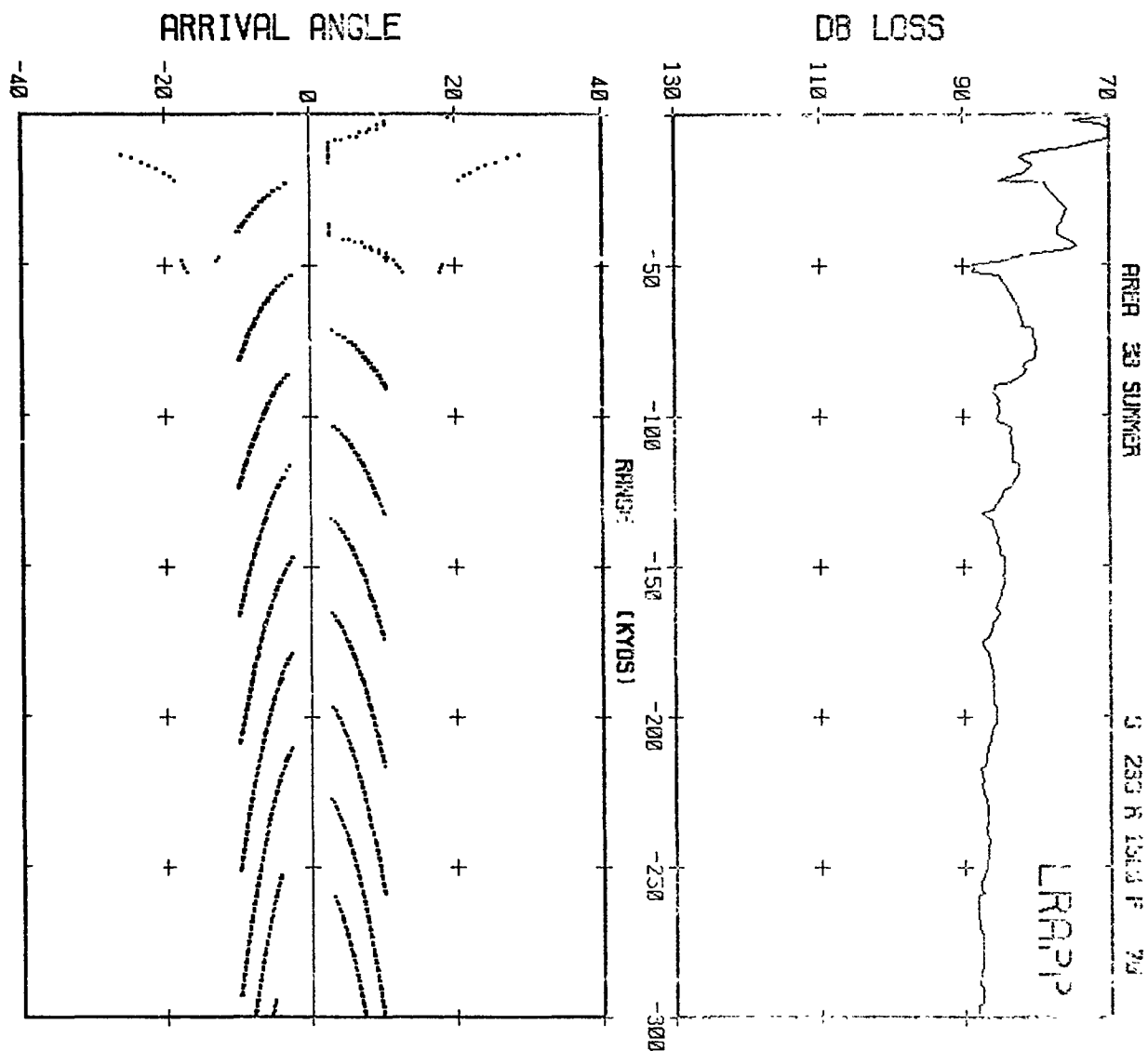
ARRIVAL ANGLE



NOISE (DB)



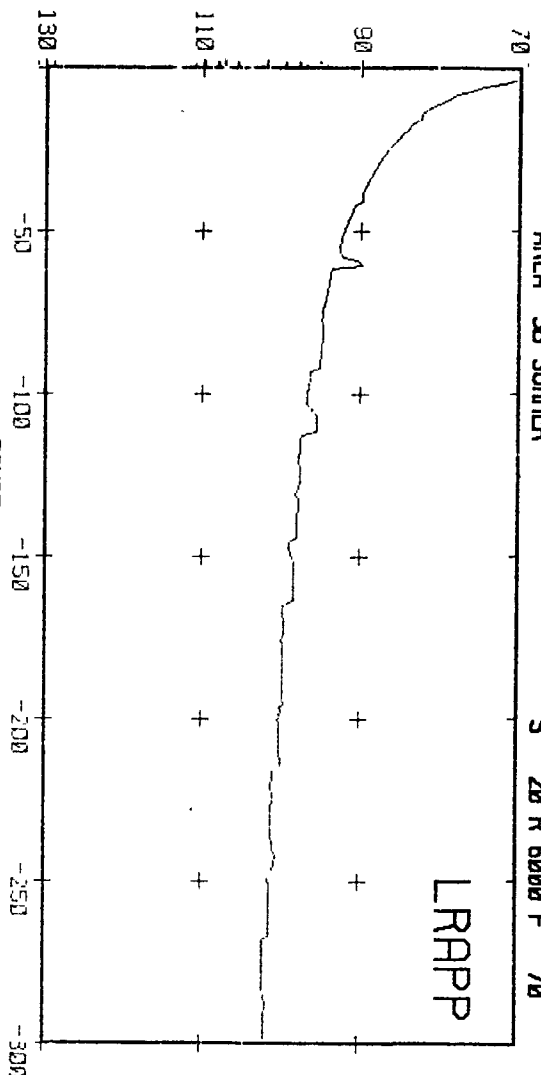




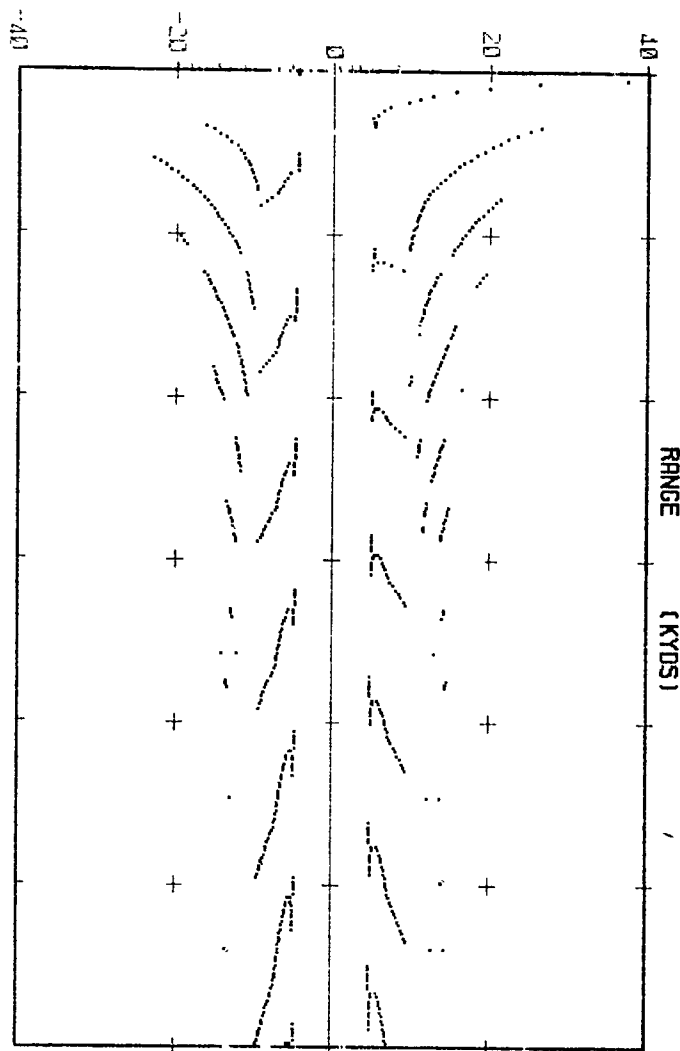
AREA 3B SUMMER

S 20 R 6000 F 70

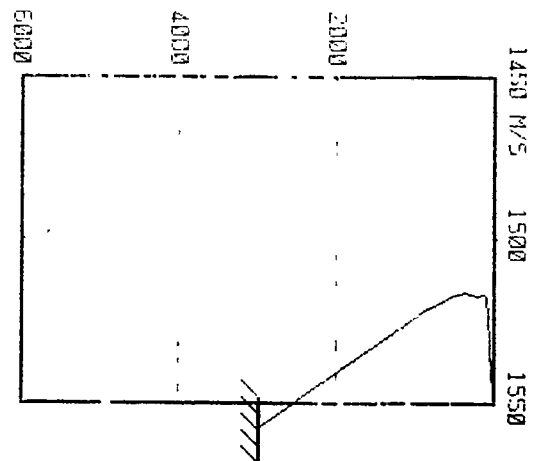
DB LOSS



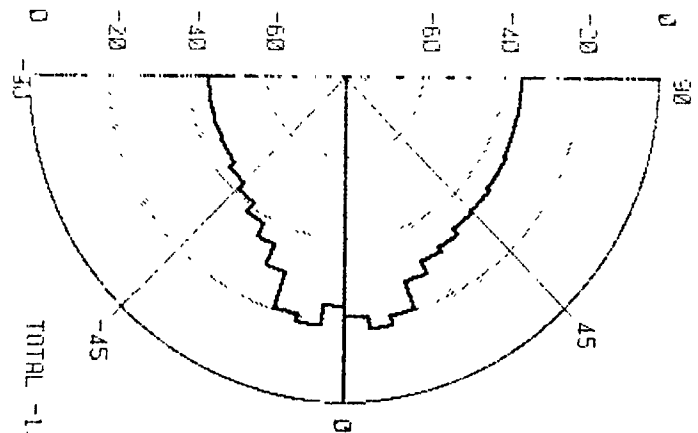
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

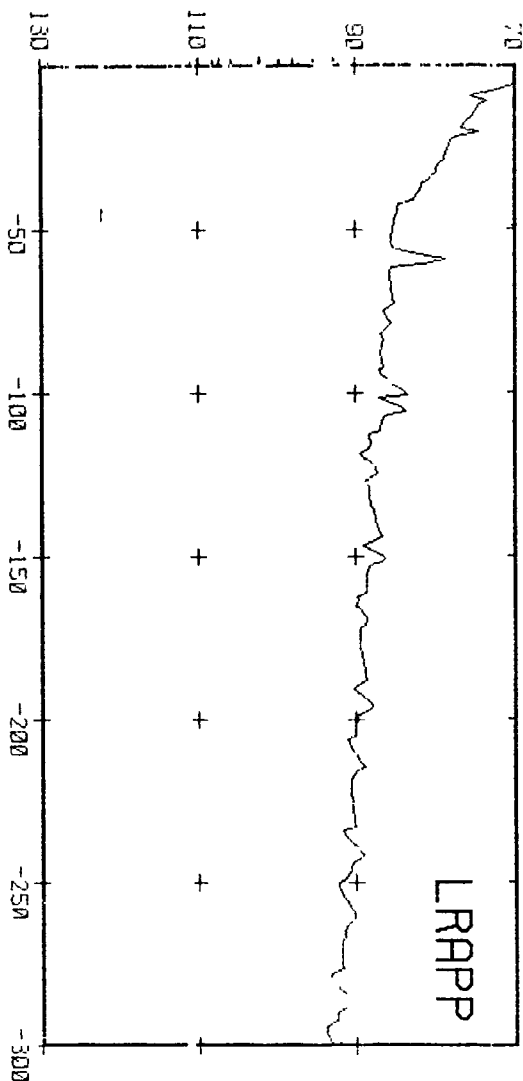


AREA 38 SUMMER

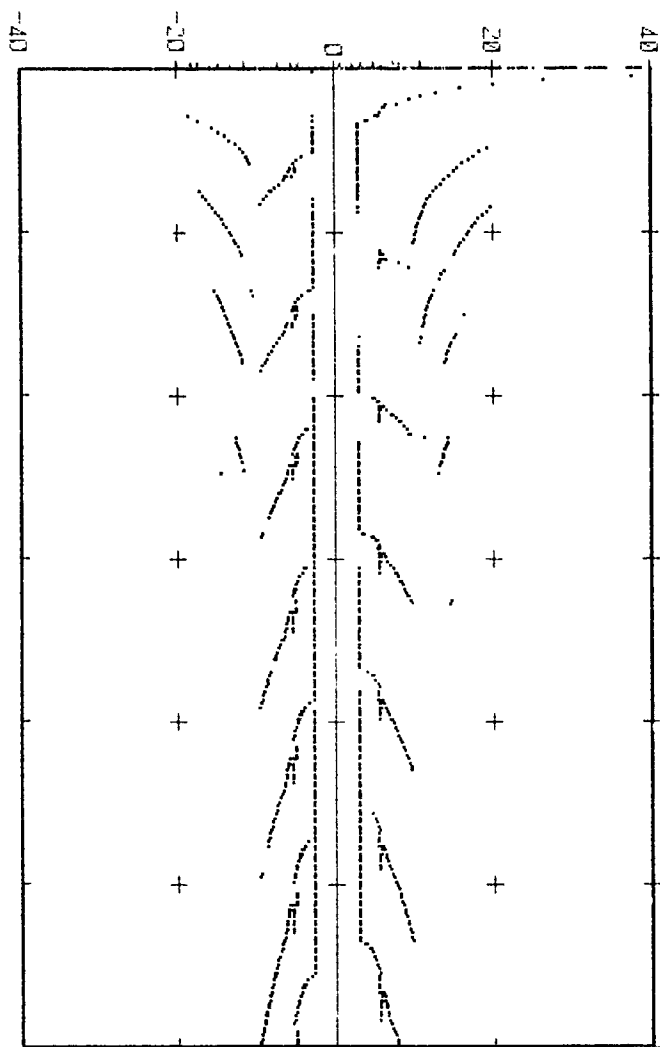
S 50 R 6000 F /0

LRAPP

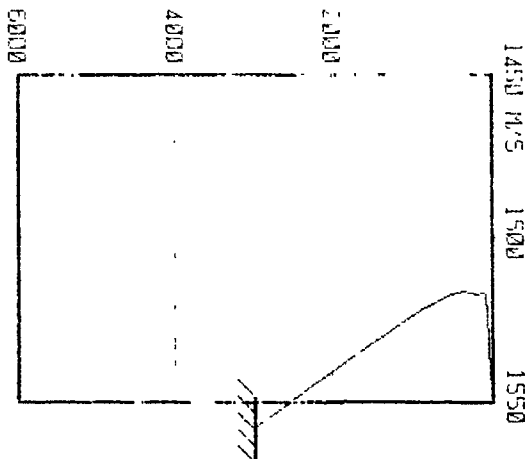
DB LOSS



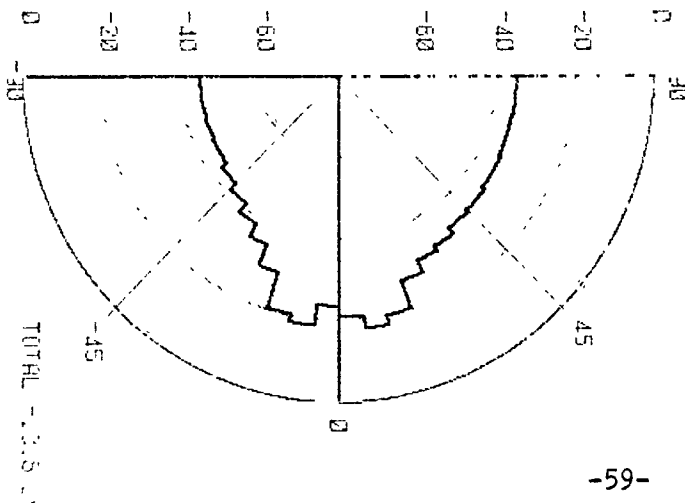
ARRIVAL ANGLE

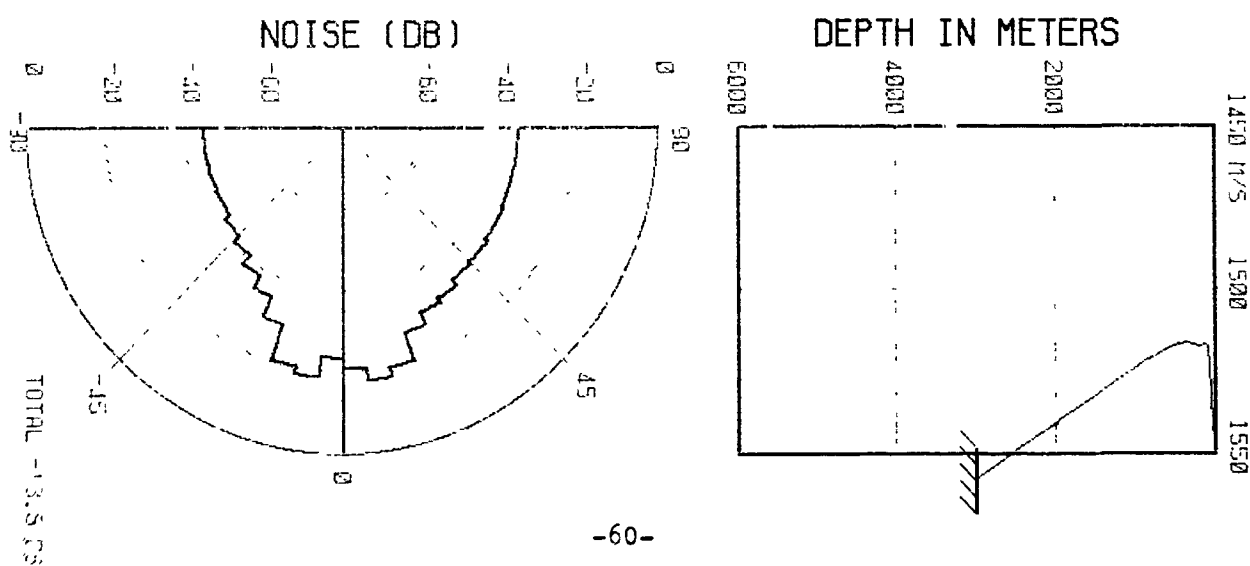
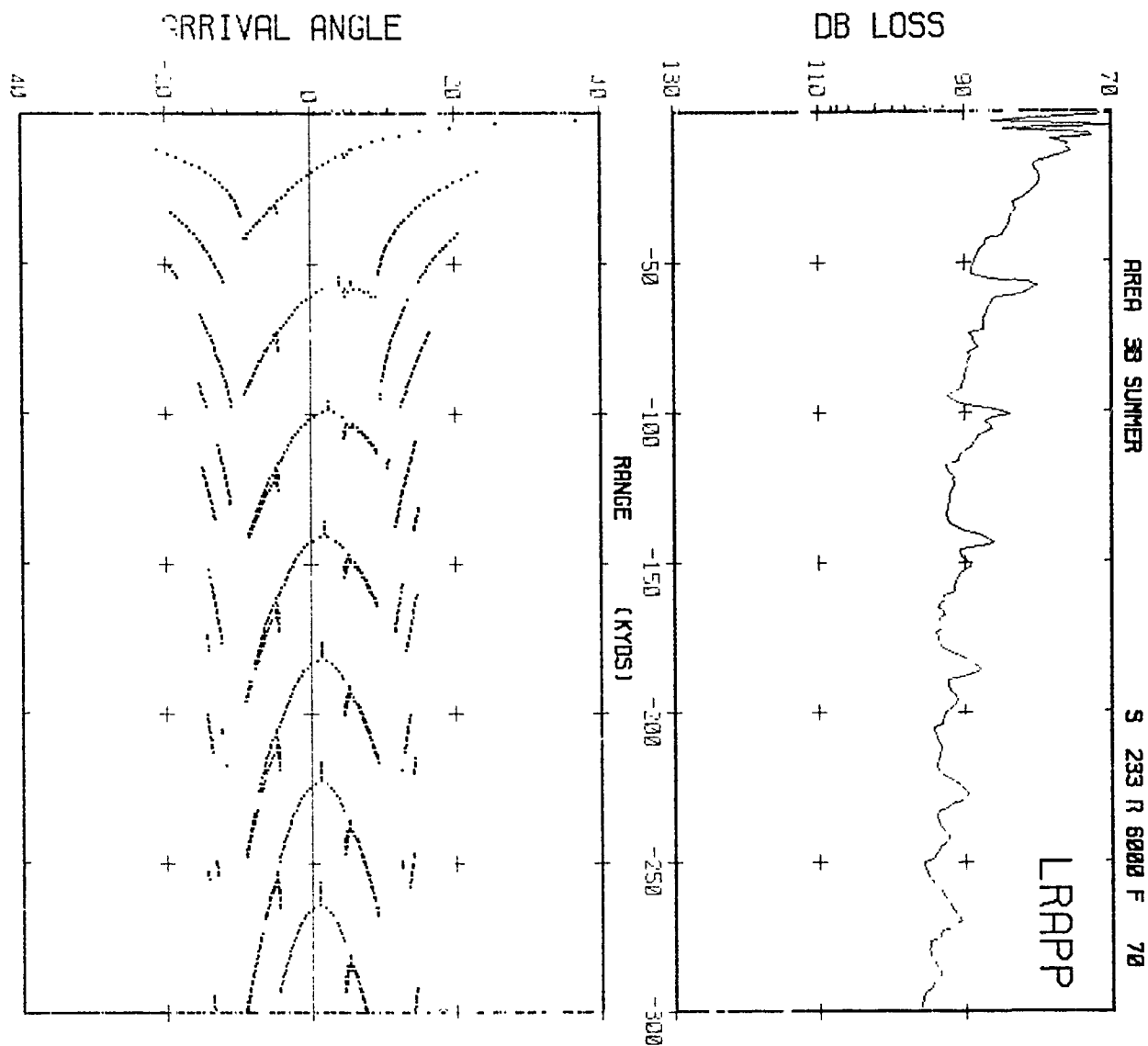


DEPTH IN METERS



NOISE (DB)

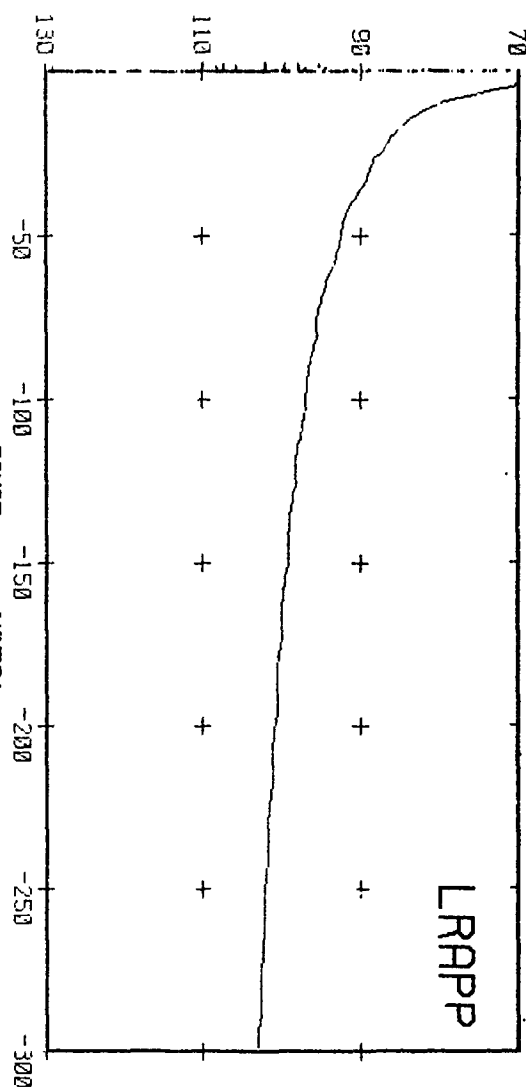




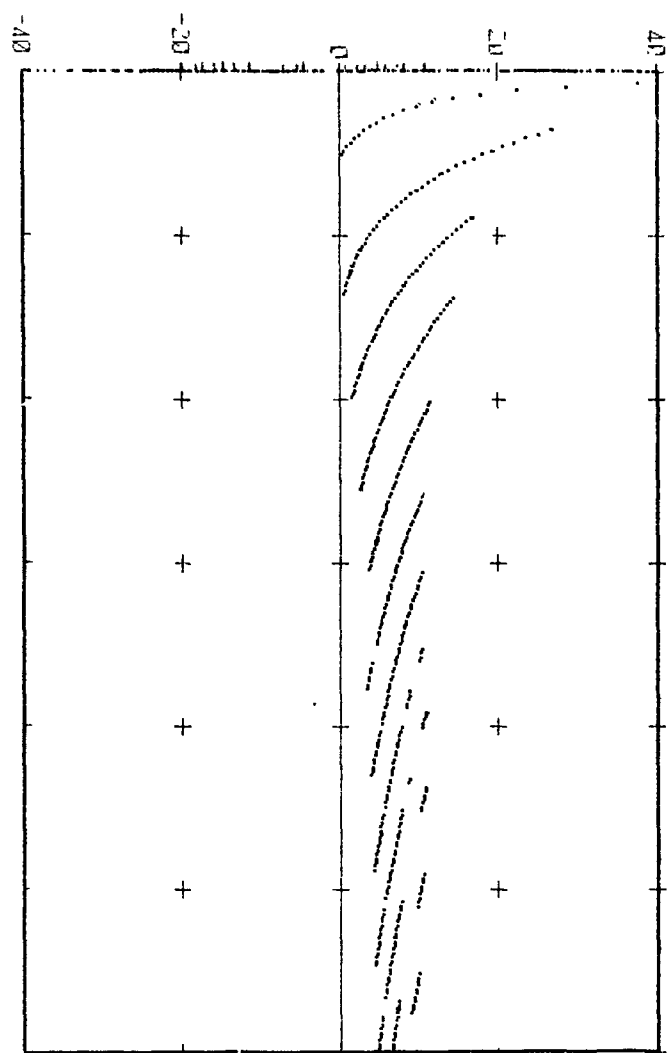
PRER 38 SUMMER S 20 R 9842 F 70

LRAPP

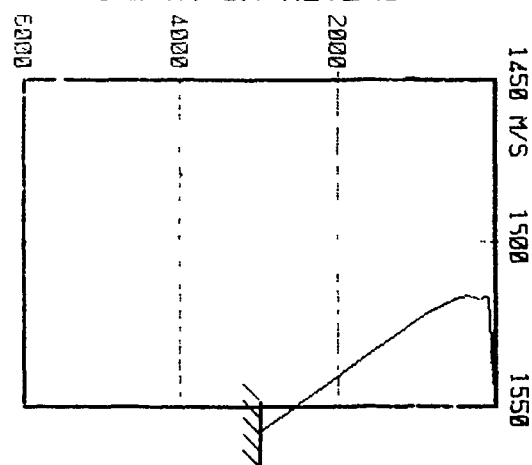
DB LOSS



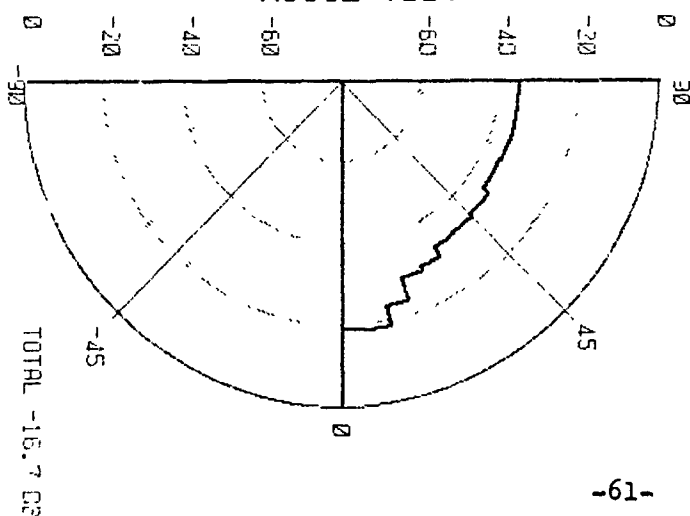
ARRIVAL ANGLE

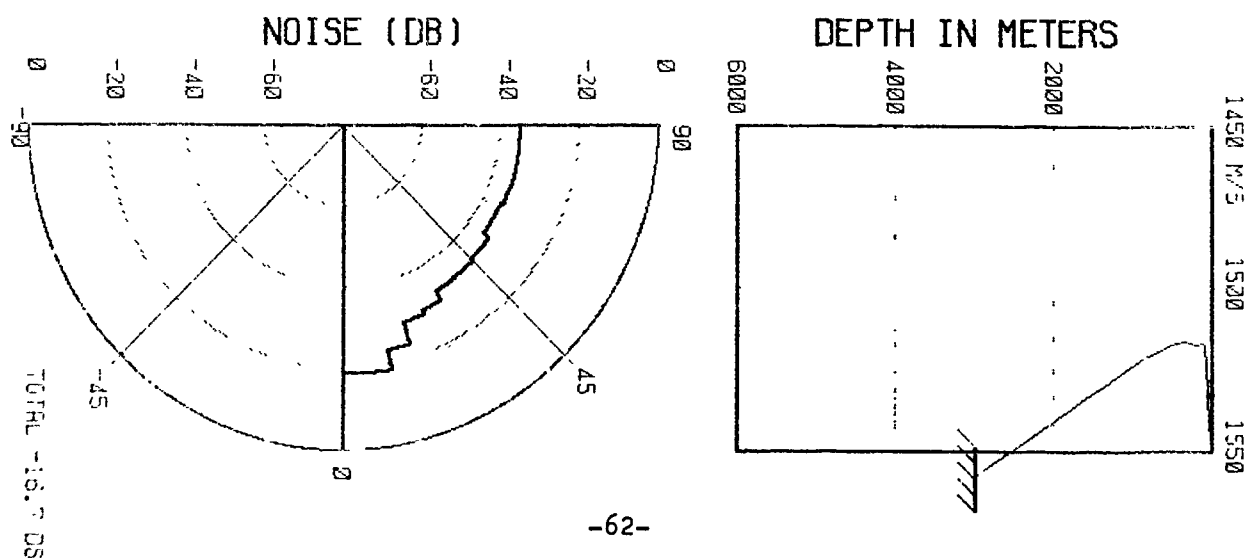
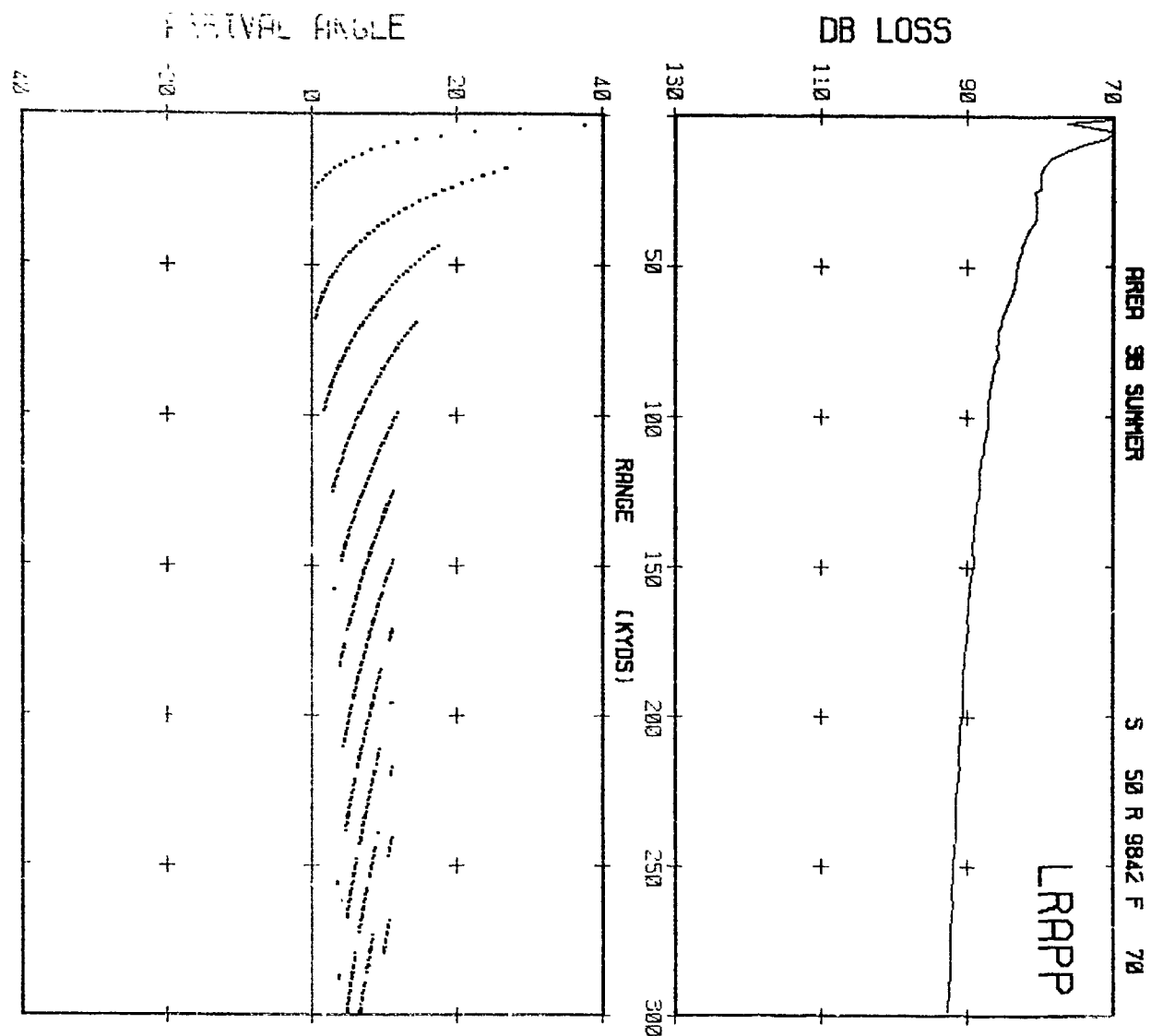


DEPTH IN METERS



NOISE (DB)





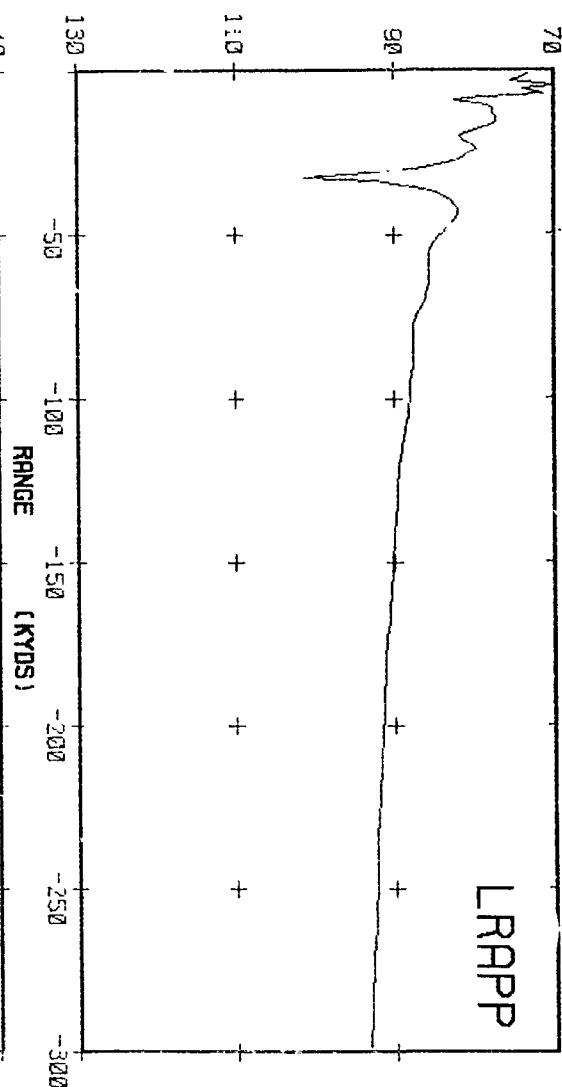


AREA 3B SUMMER

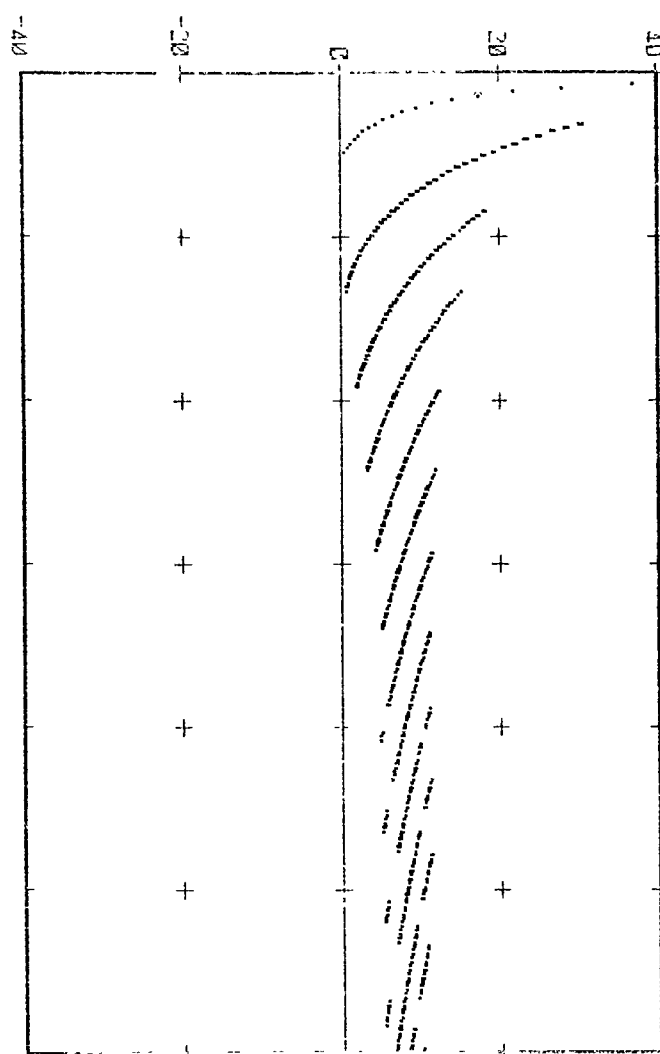
S 233 R 9842 F 70

LRAPP

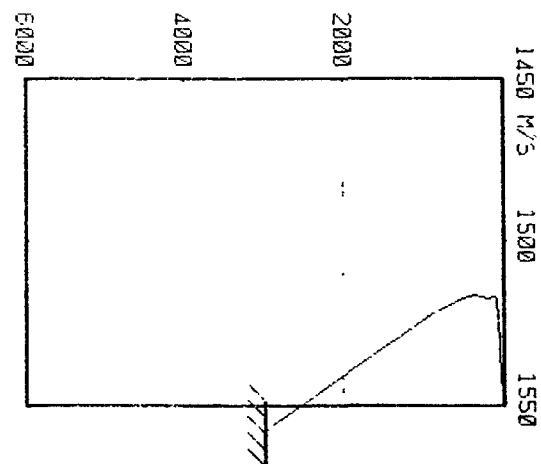
DB LOSS



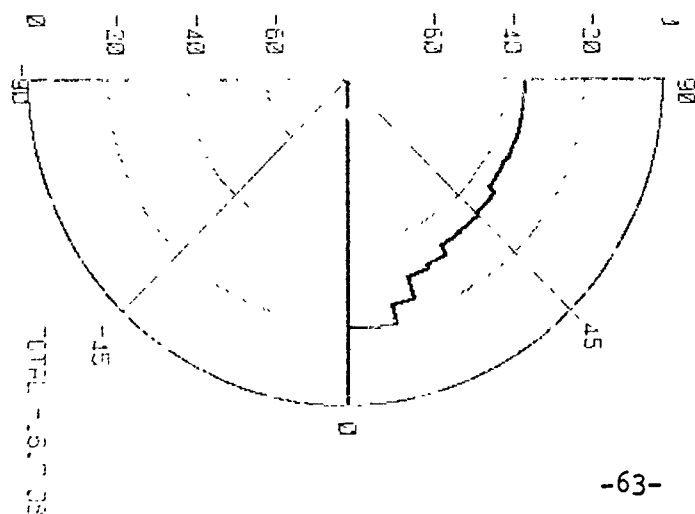
ARRIVAL ANGLE

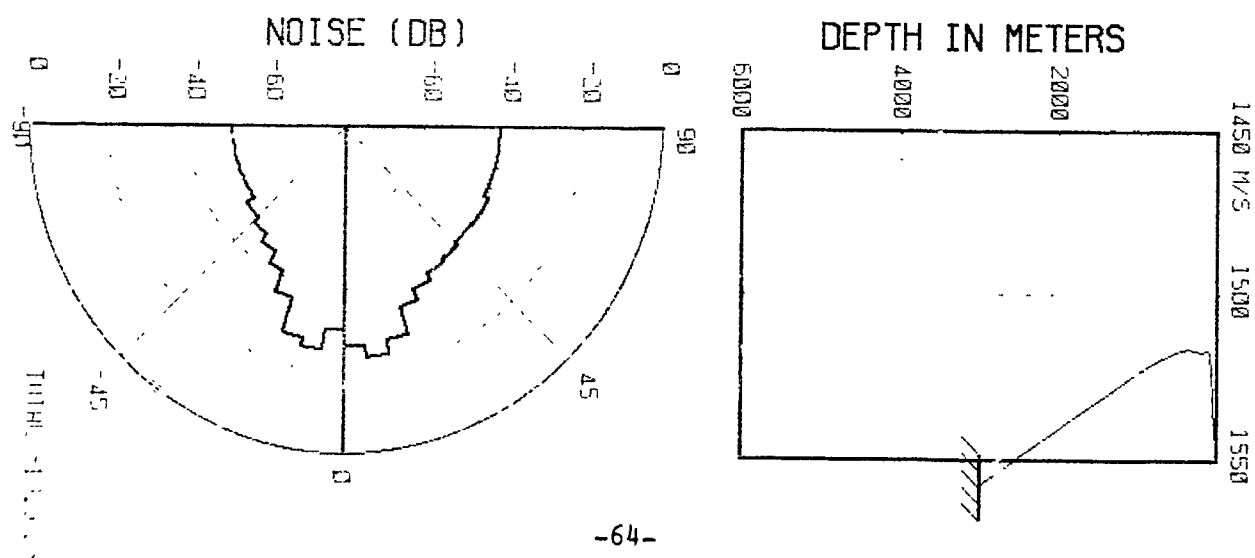
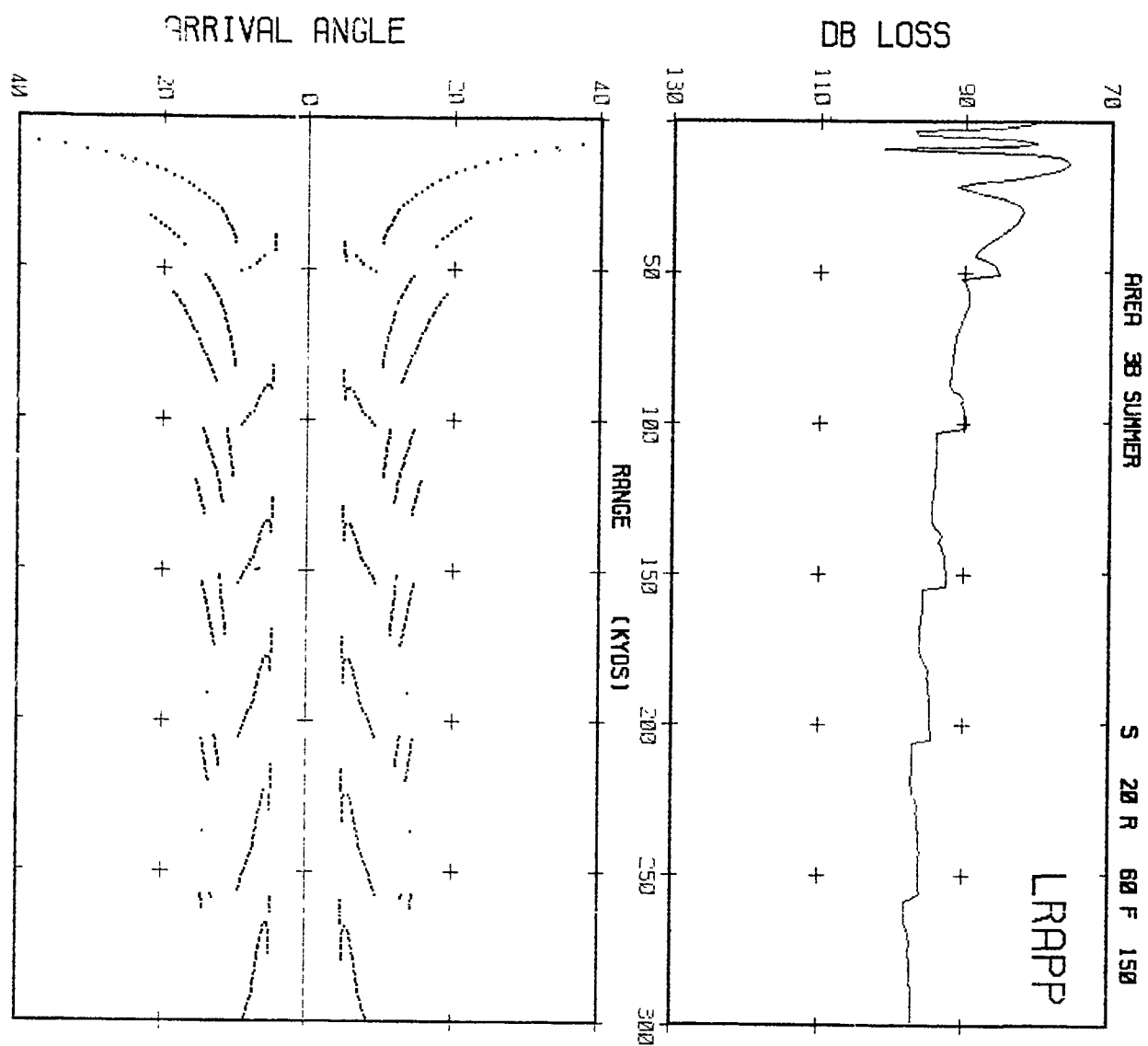


DEPTH IN METERS



NOISE (DB)



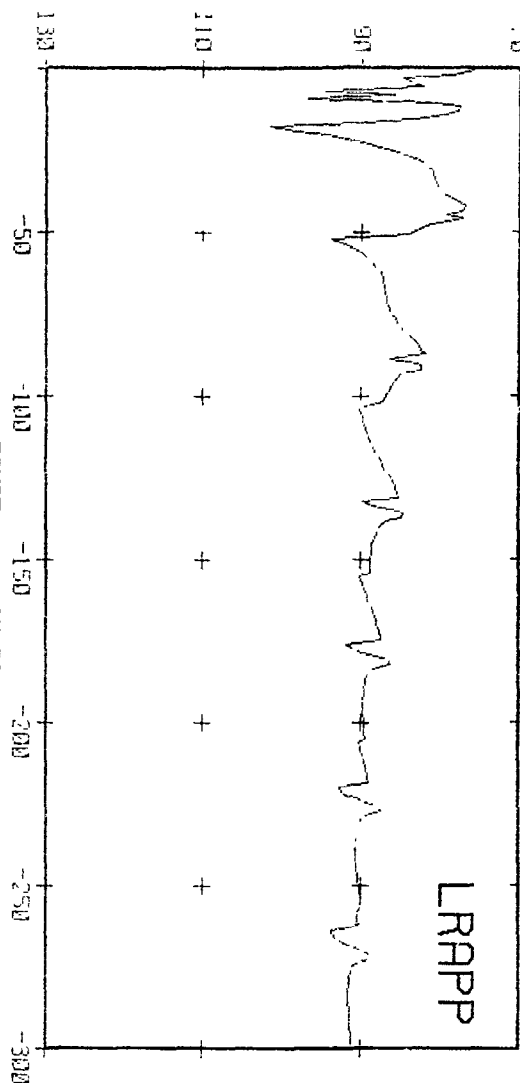


AREA 38 SUMMER

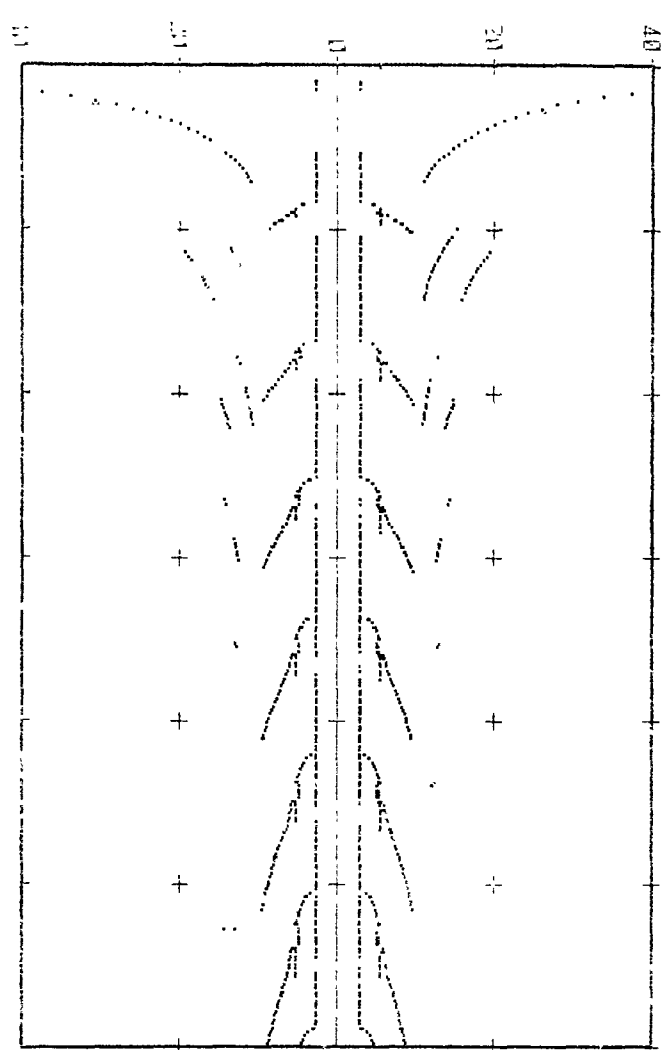
S 50 R 60 F 150

1450 11/5 1500 1550

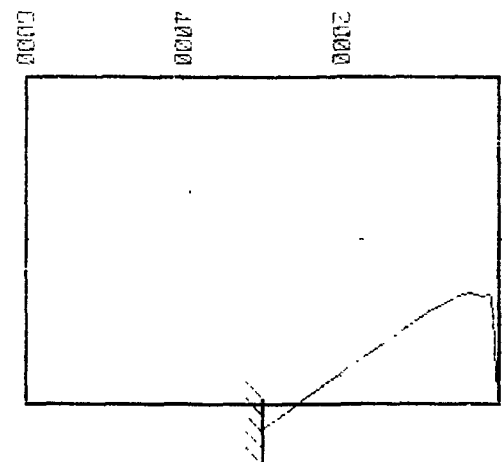
DB LOSS



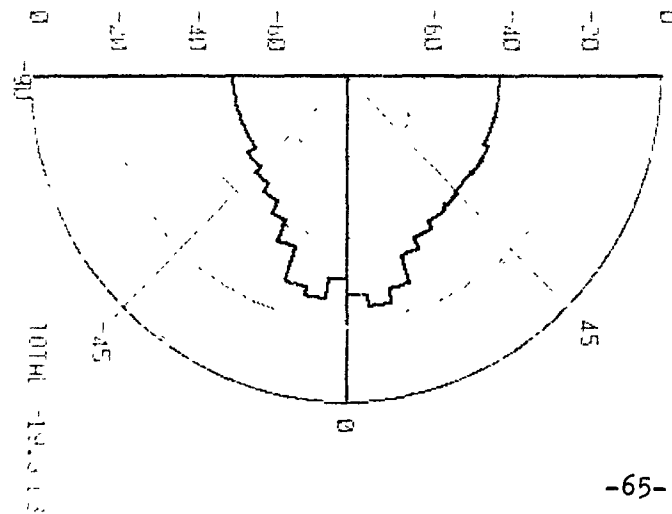
ARRIVAL ANGLE

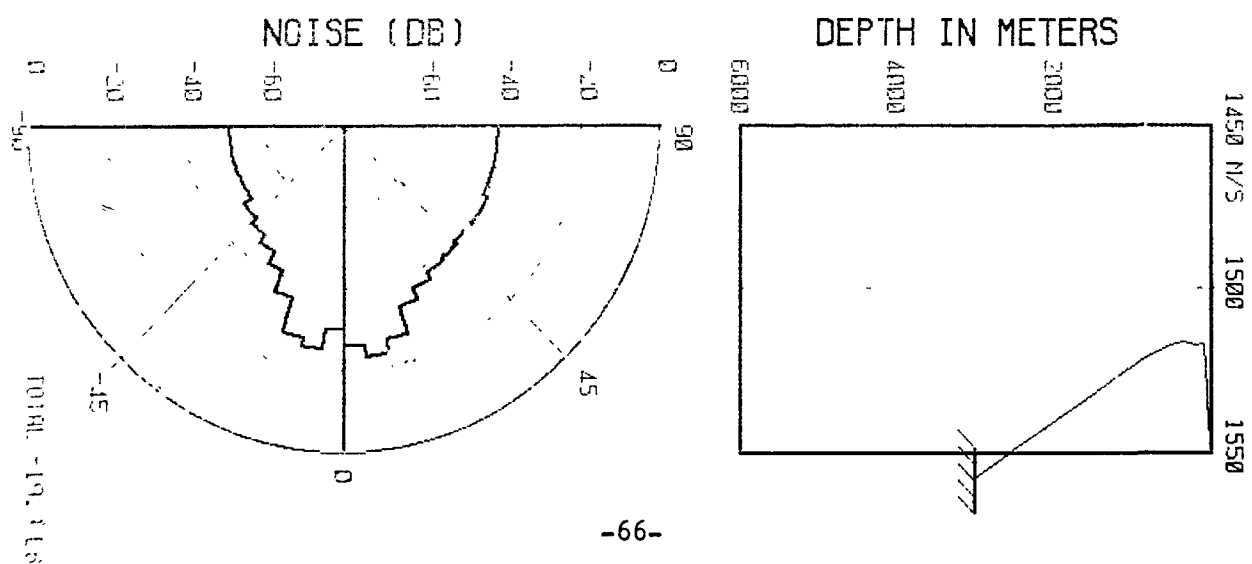
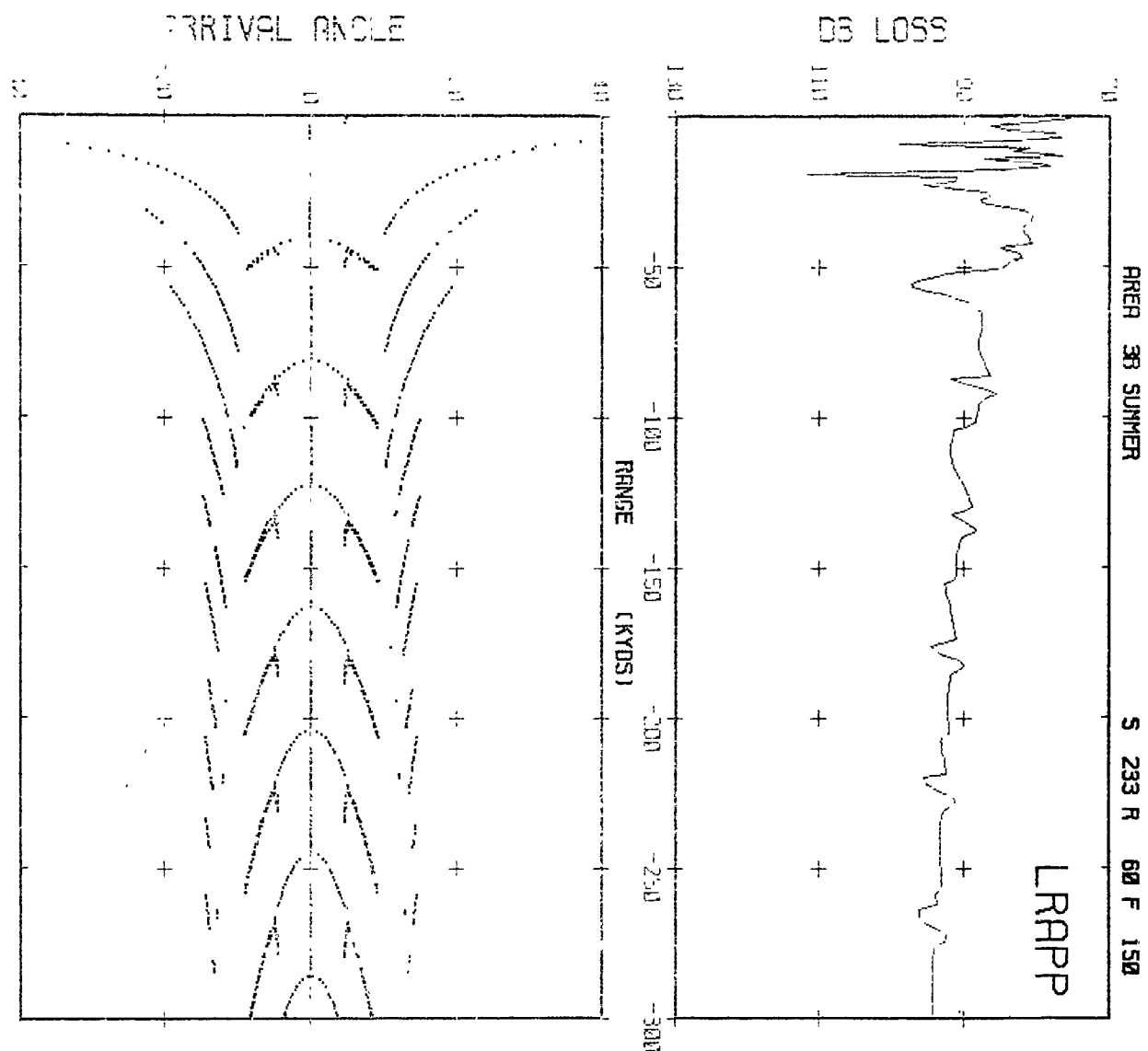


DEPTH IN METERS



NOISE (DB)

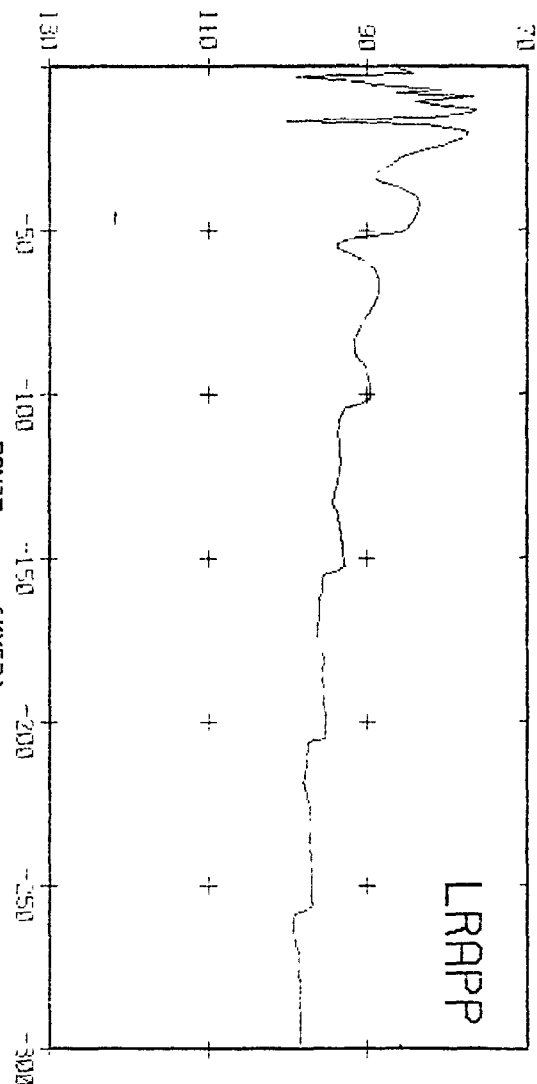




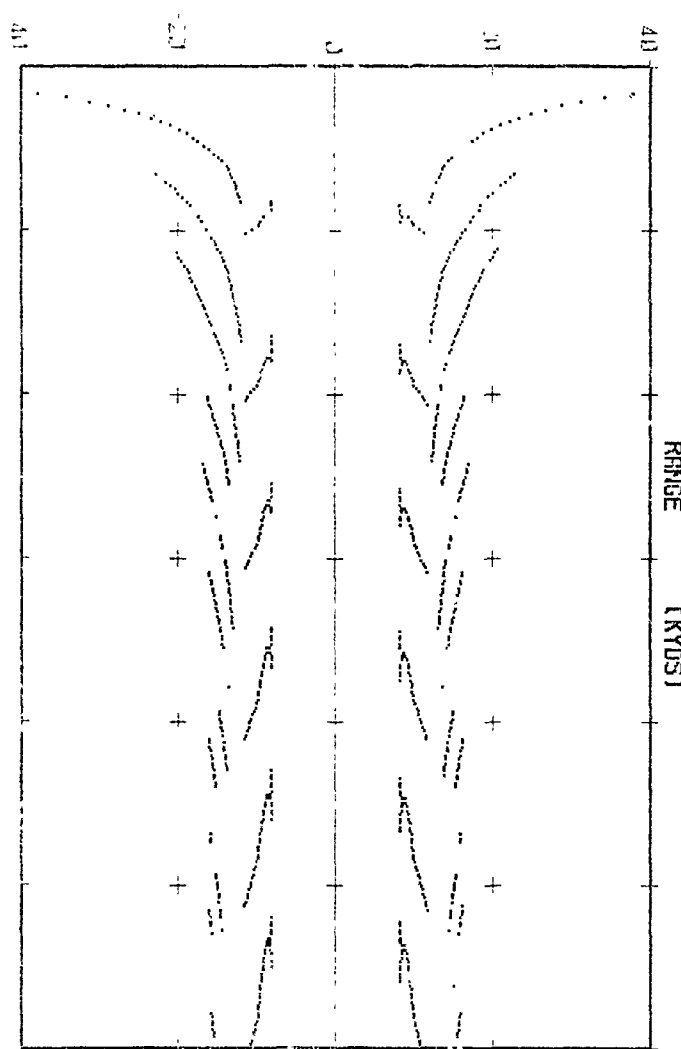
AREA 38 SUMMER

S 20 R 133 F 150

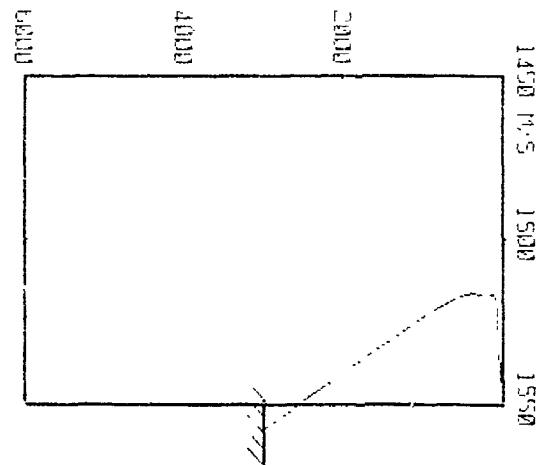
DB LOSS



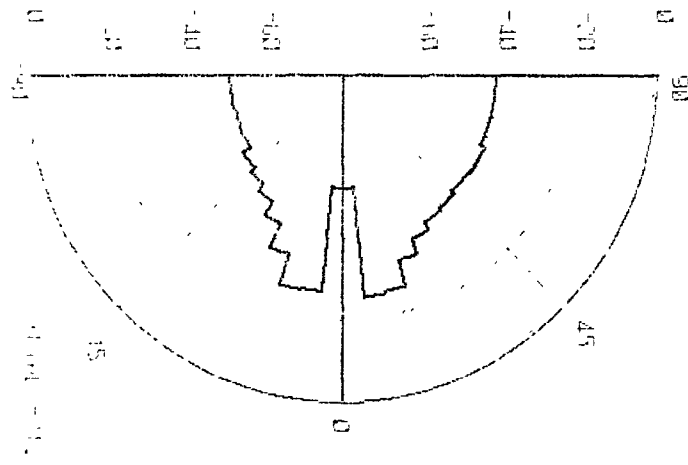
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

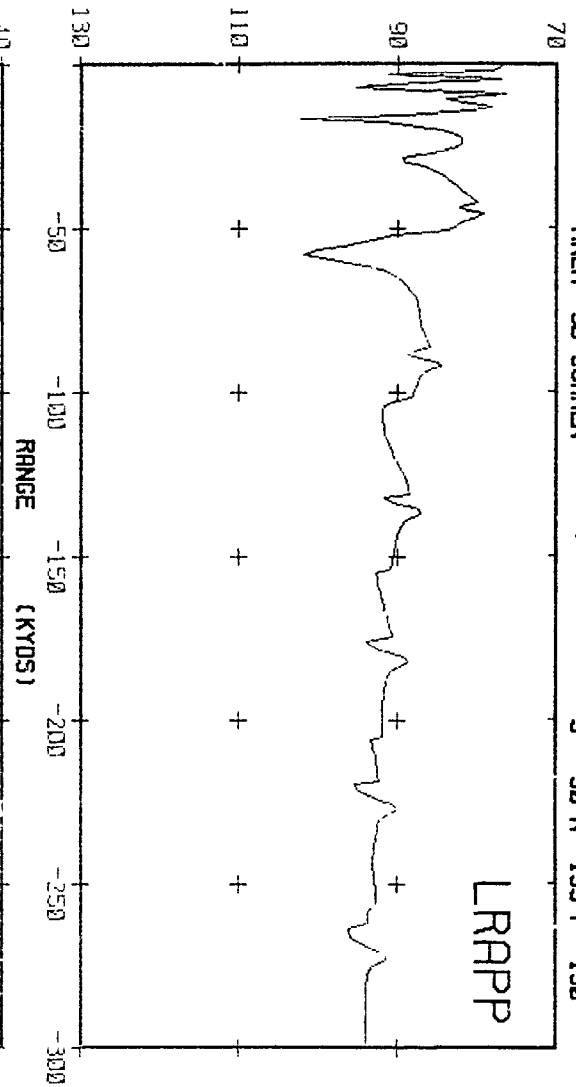


AREA 38 SUMMER

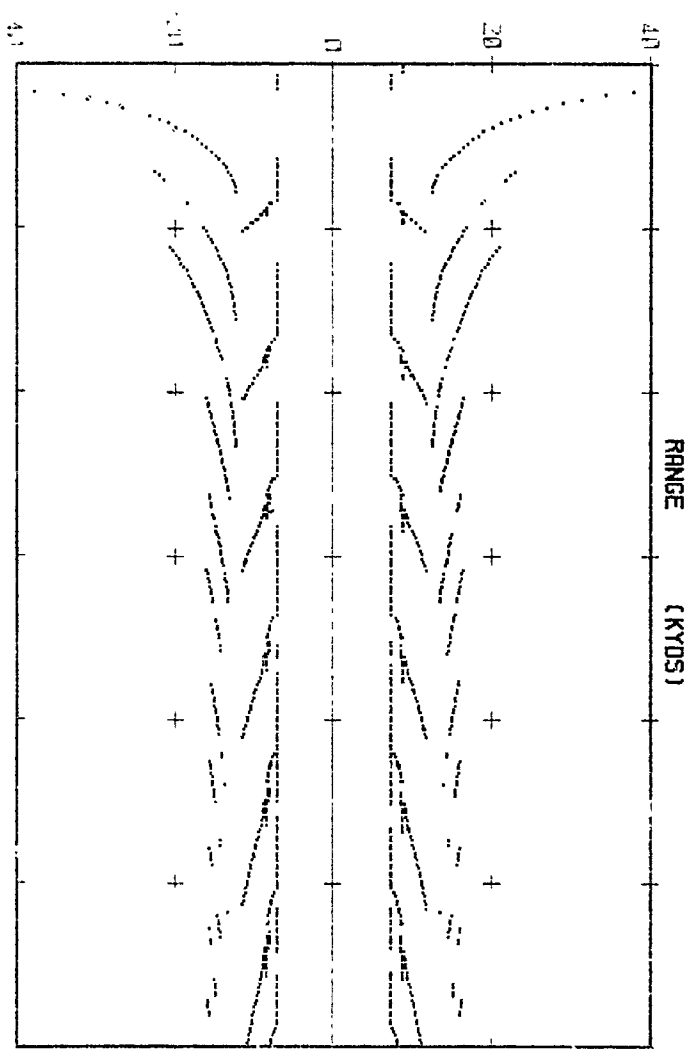
S 50 R 133 F 150

1450 M'S 1500 1550

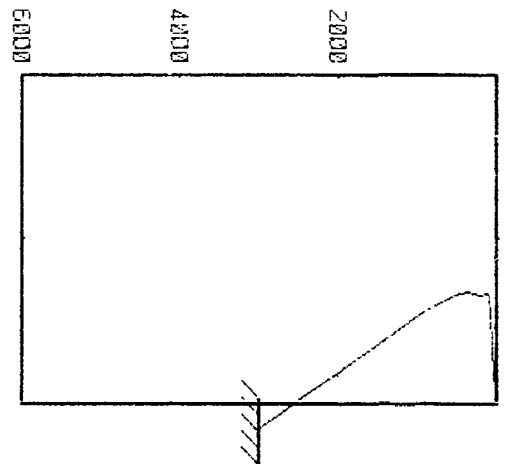
DB LOSS



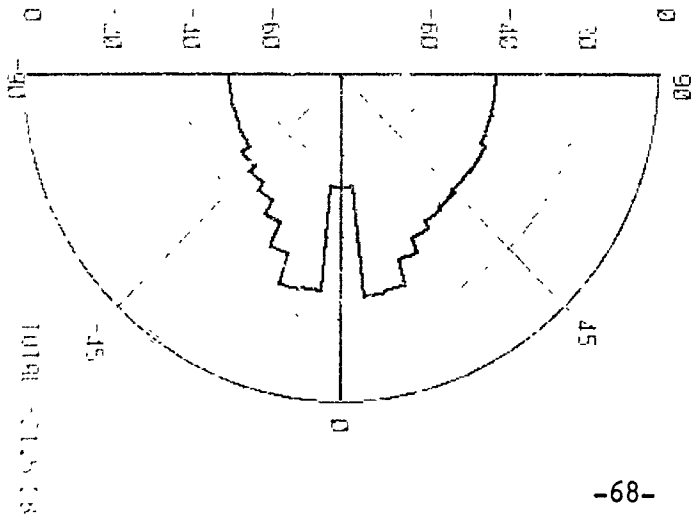
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

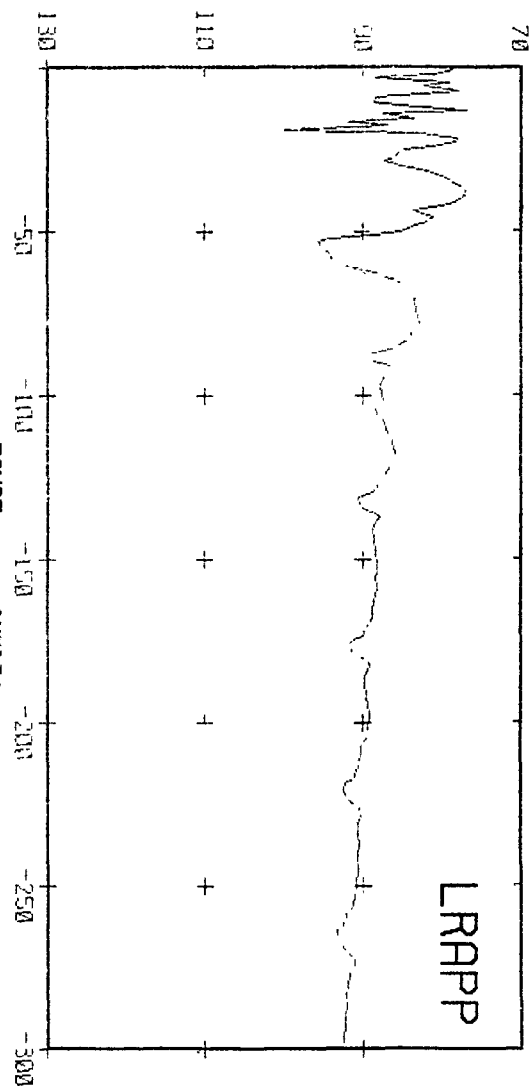


RRER 38 SUMMER

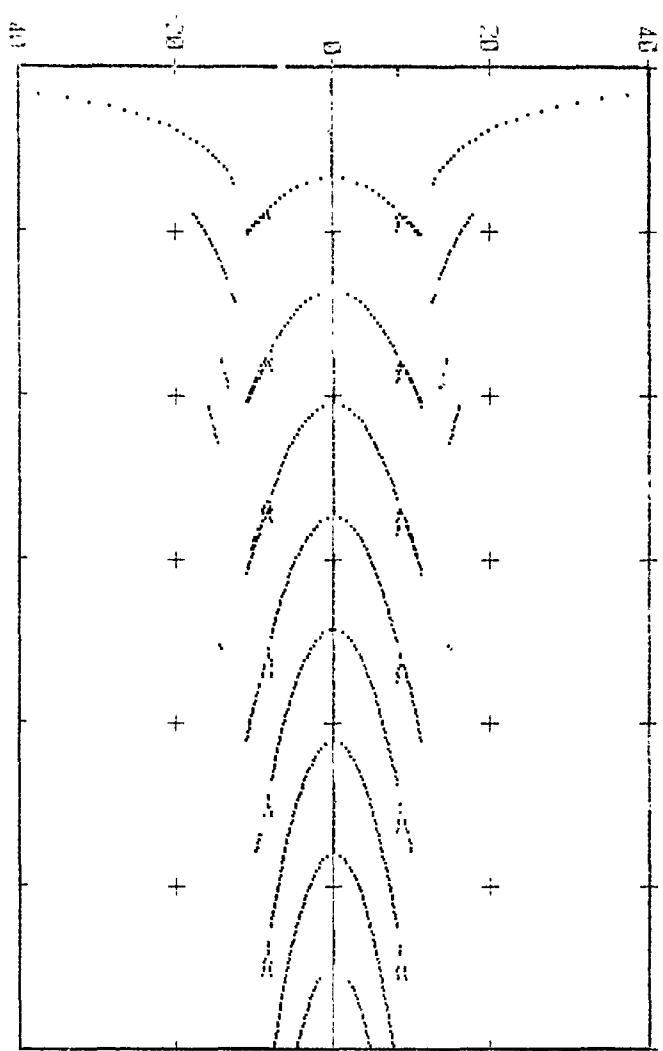
S 233 R 133 F 150

1450 M/S 1500 1550

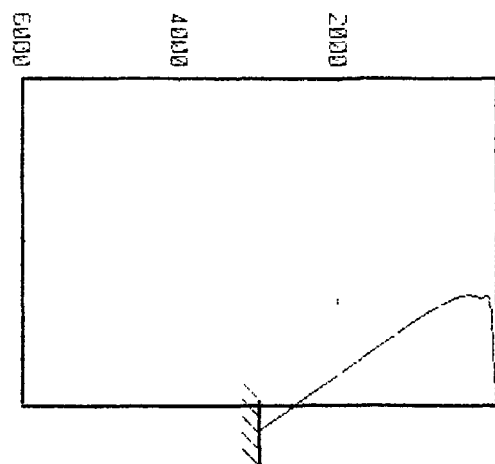
DB LOSS



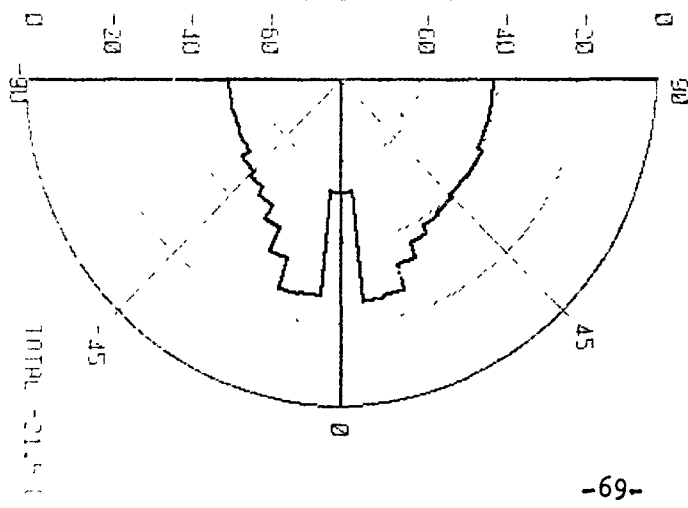
ARRIVAL SNR F



DEPTH IN METERS



NOISE (DB)



AREA 38 SUMMER

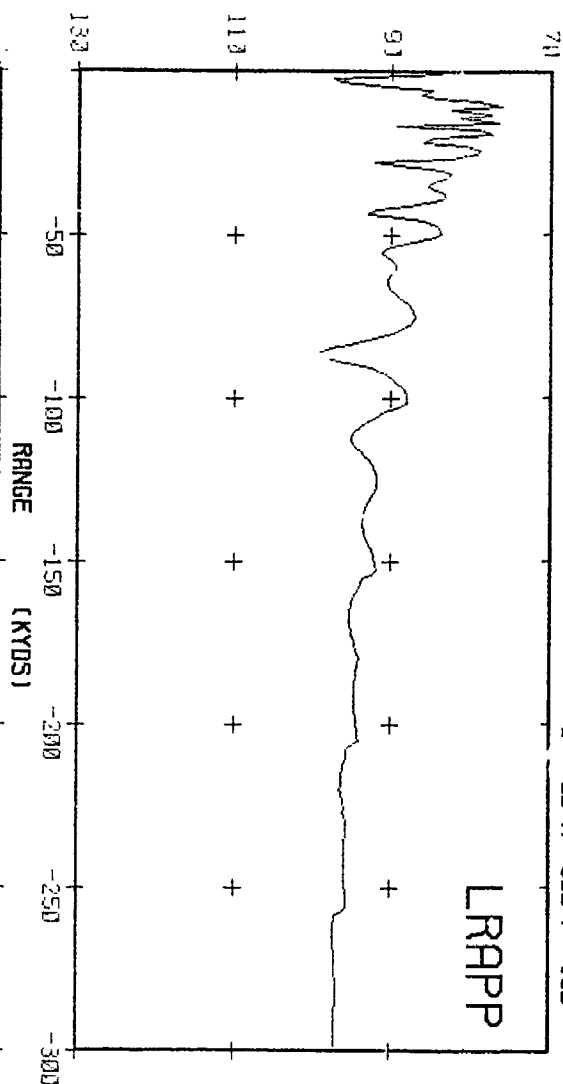
S 20 R 302 F 150

1450 M/S

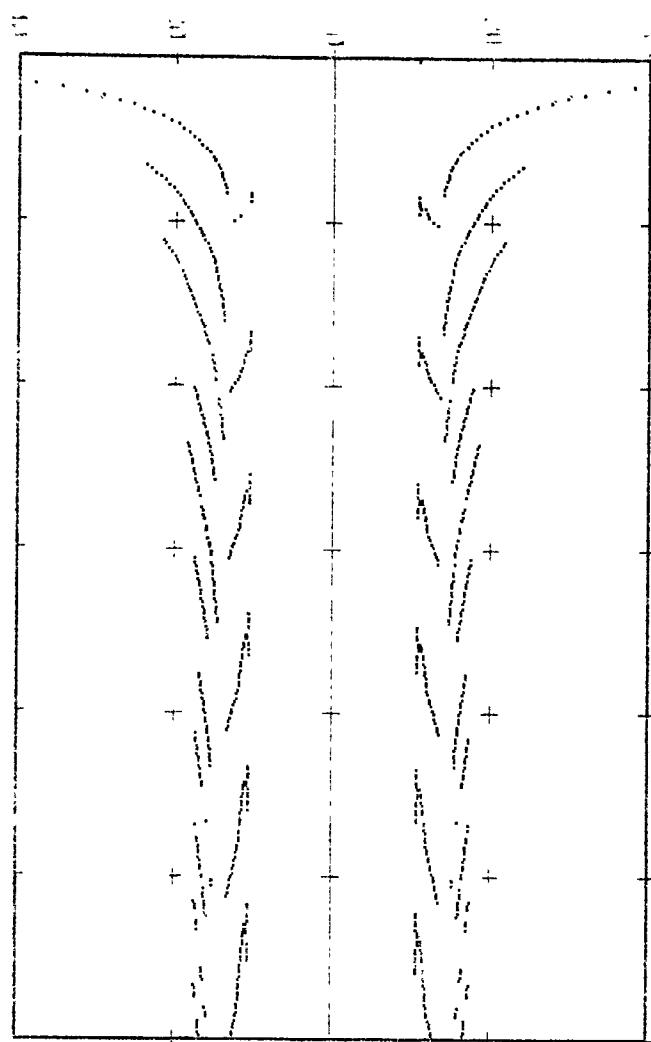
1500

1550

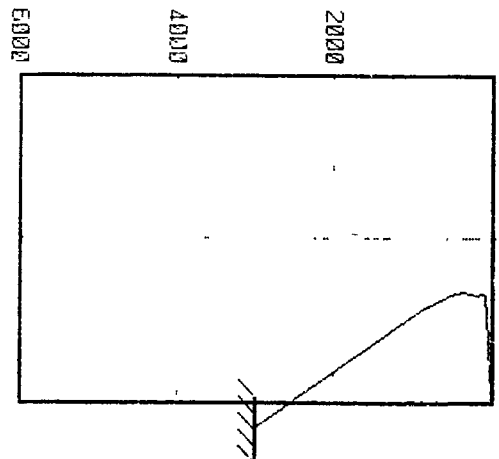
DB LOSS



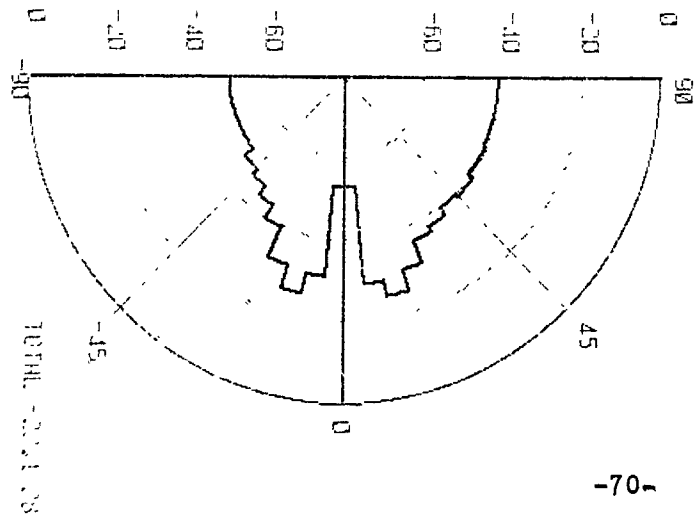
ARRIVAL ANGLE



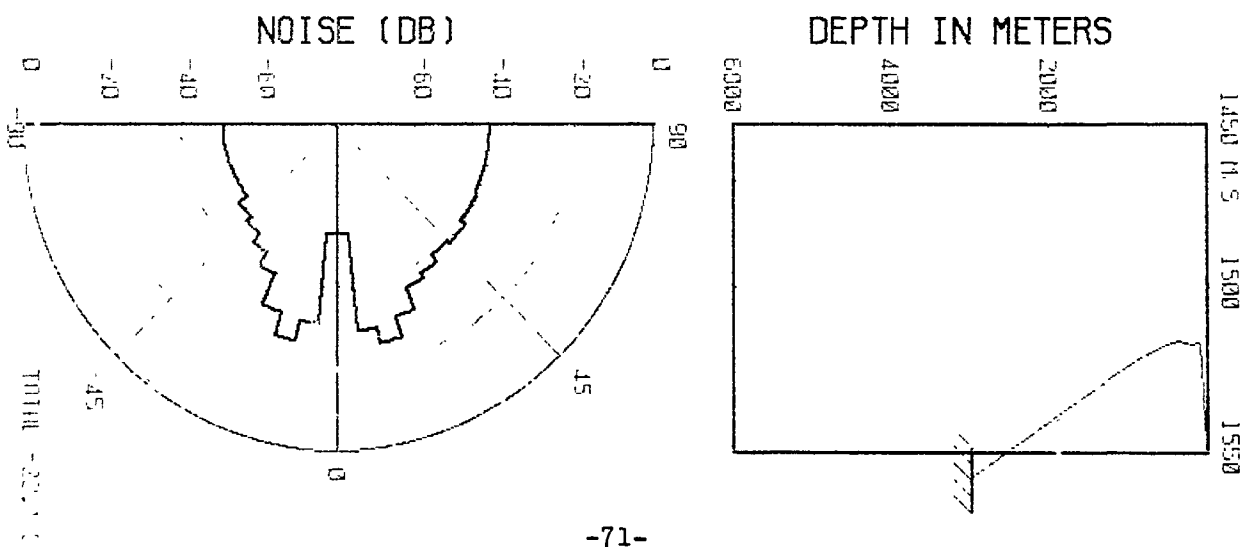
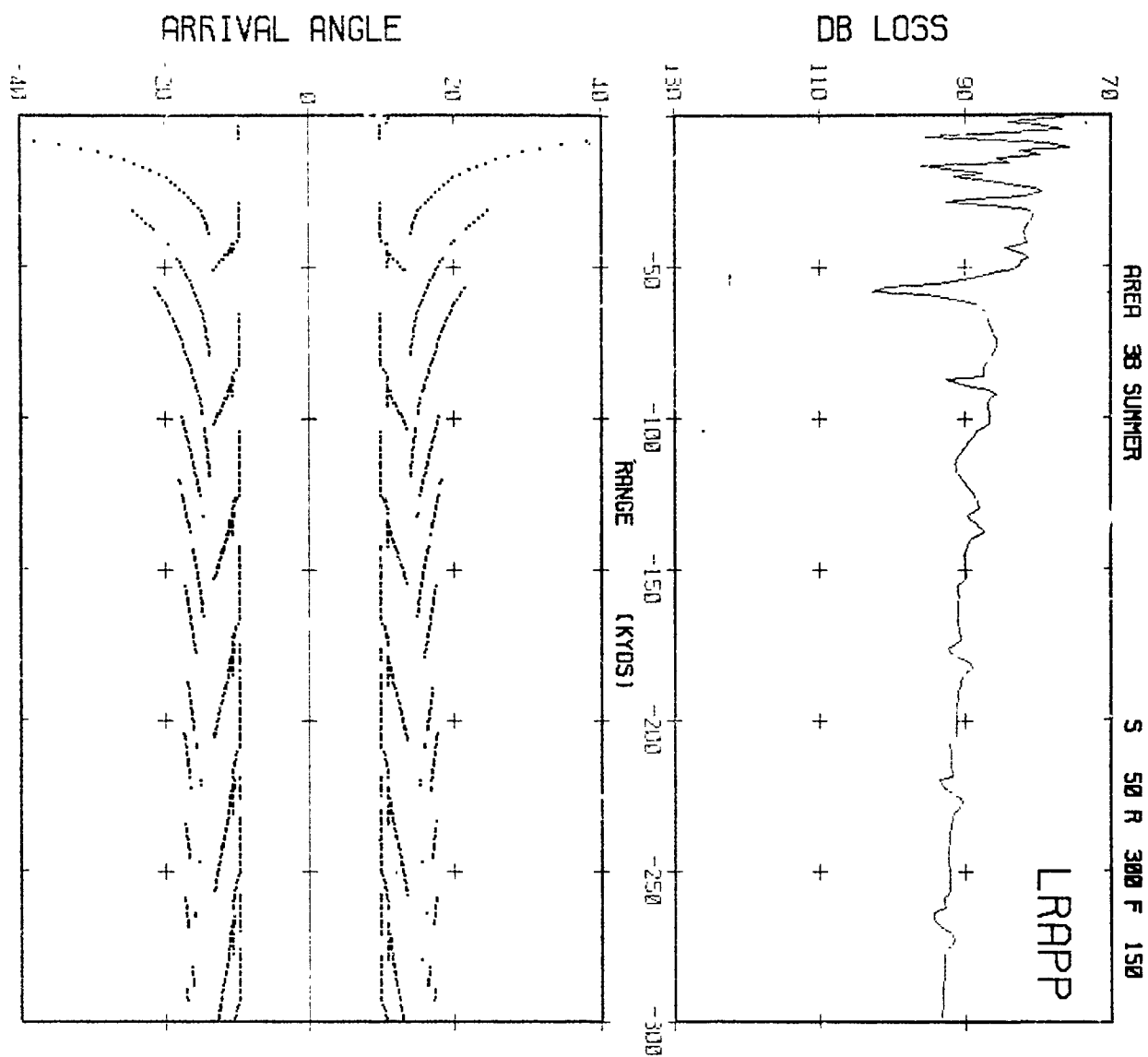
DEPTH IN METERS

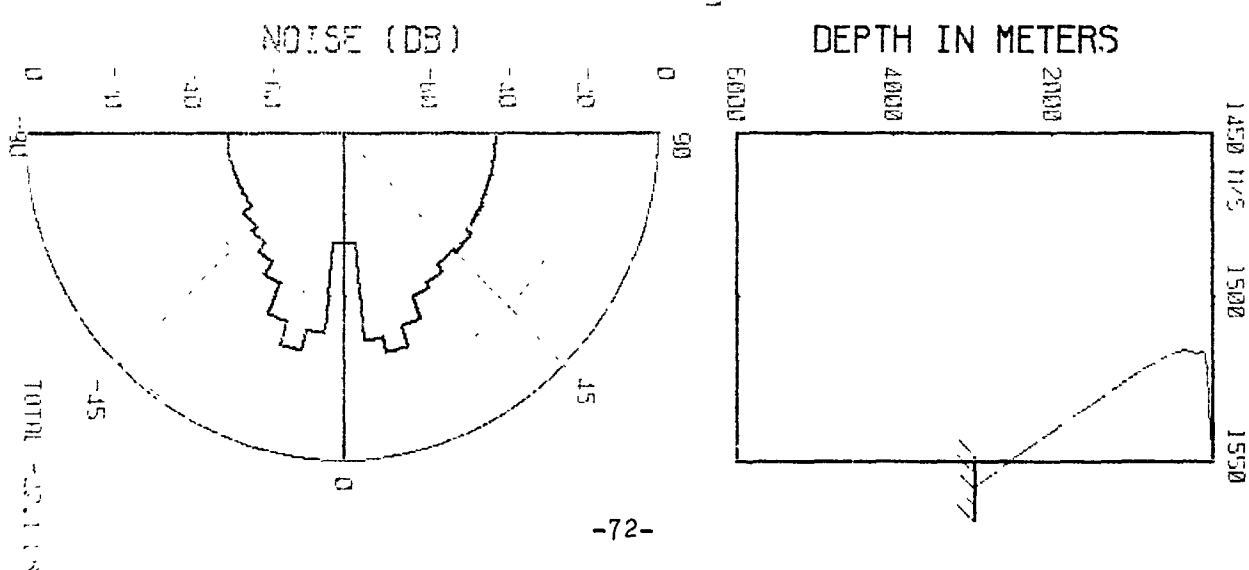
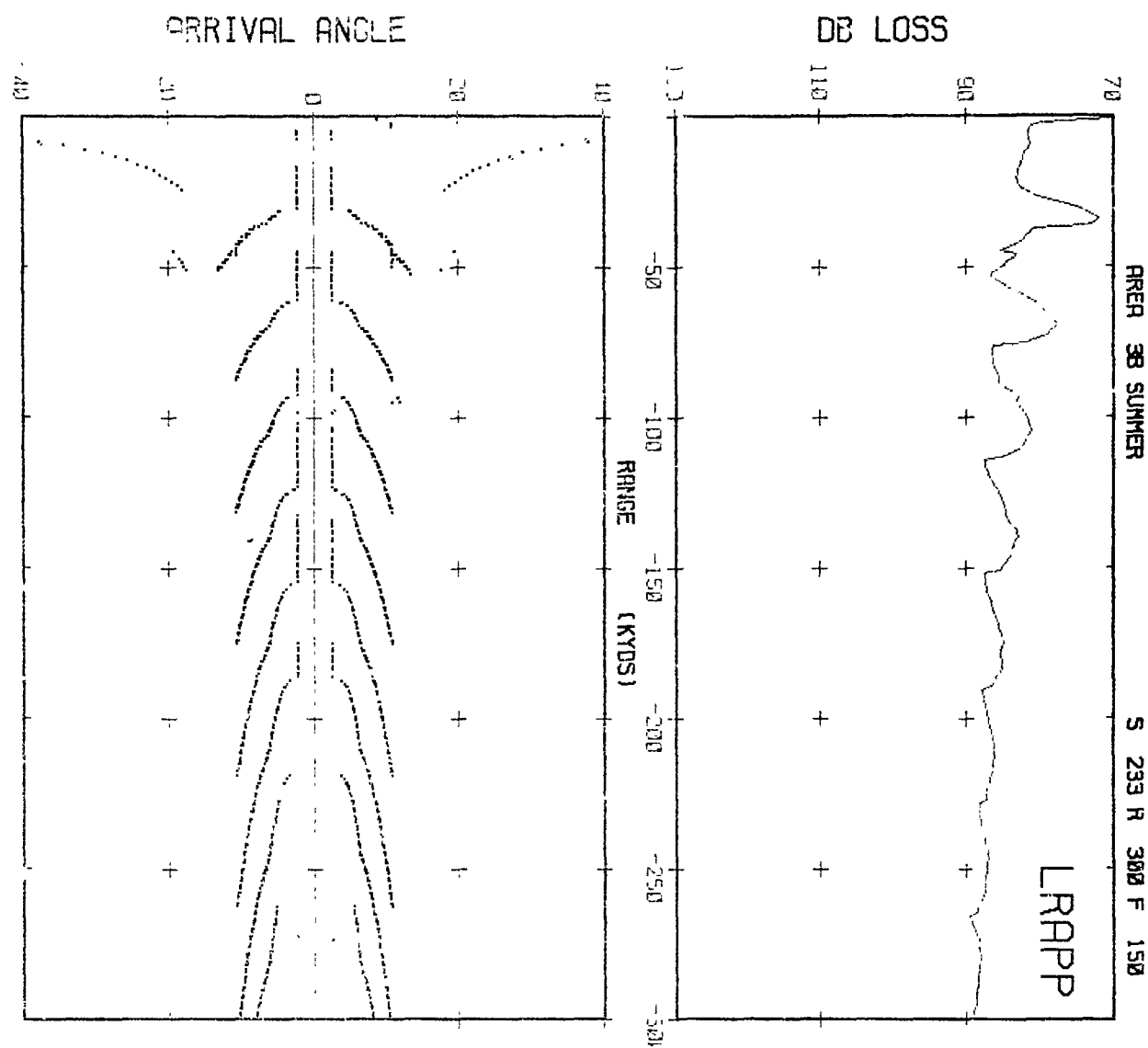


NOISE (DB)







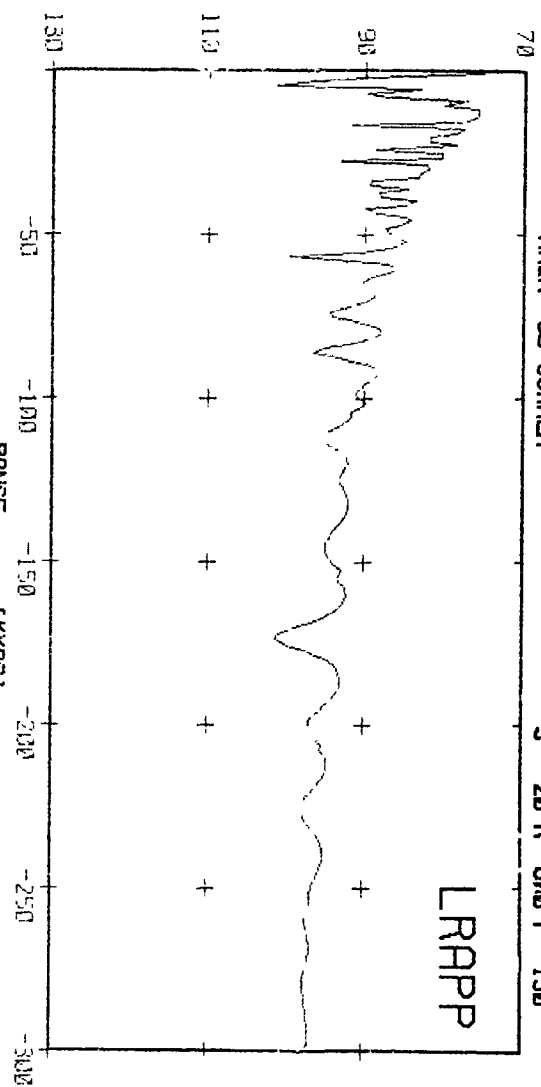


AREA 38 SUMMER

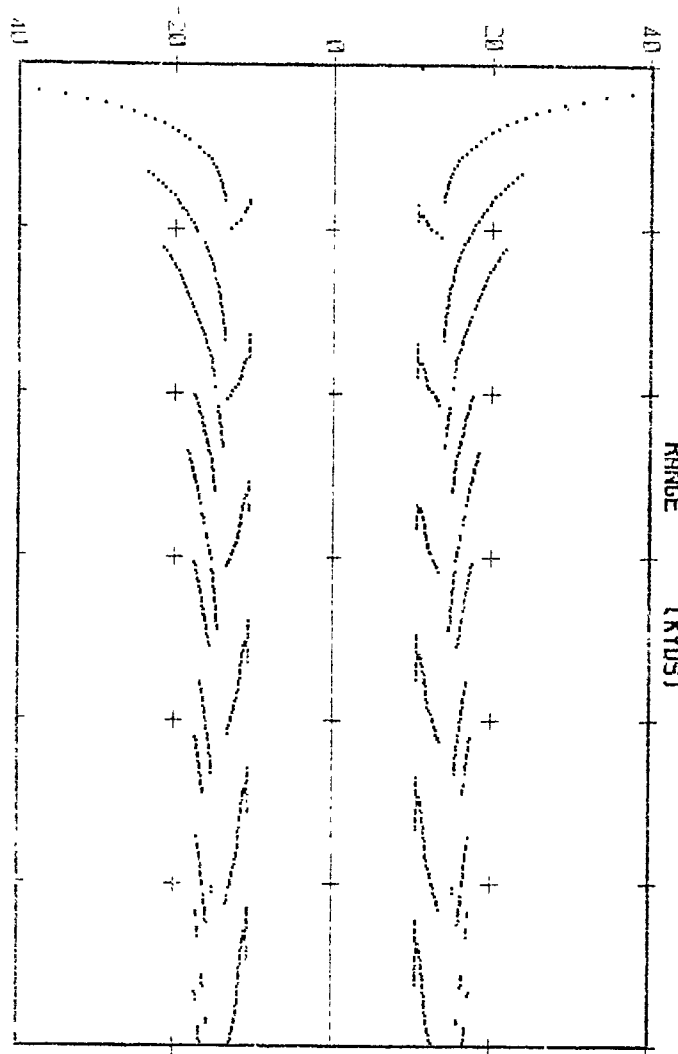
S 20 R 600 F 150

1450 M/S 1500 1550

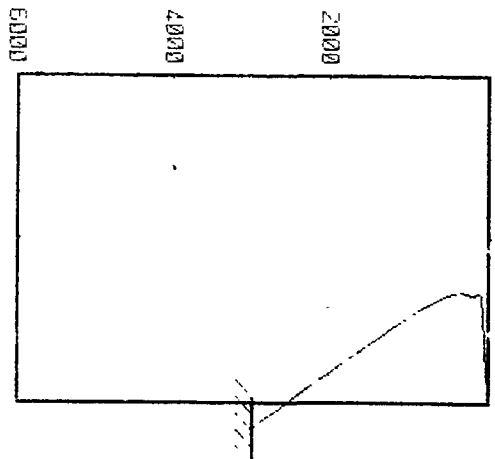
DB LOSS



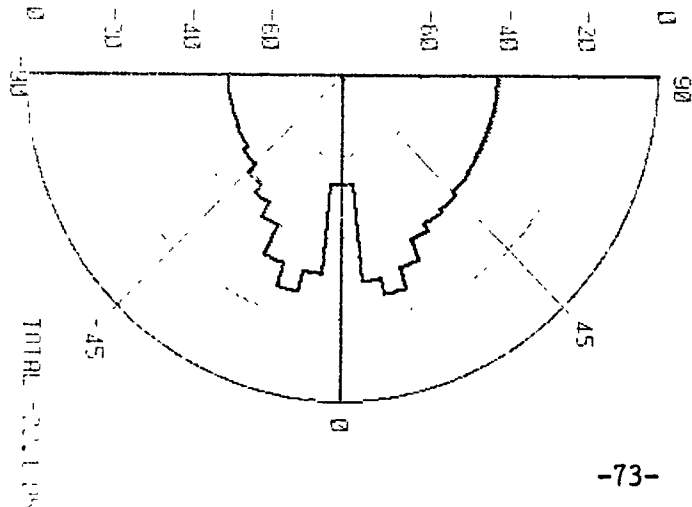
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

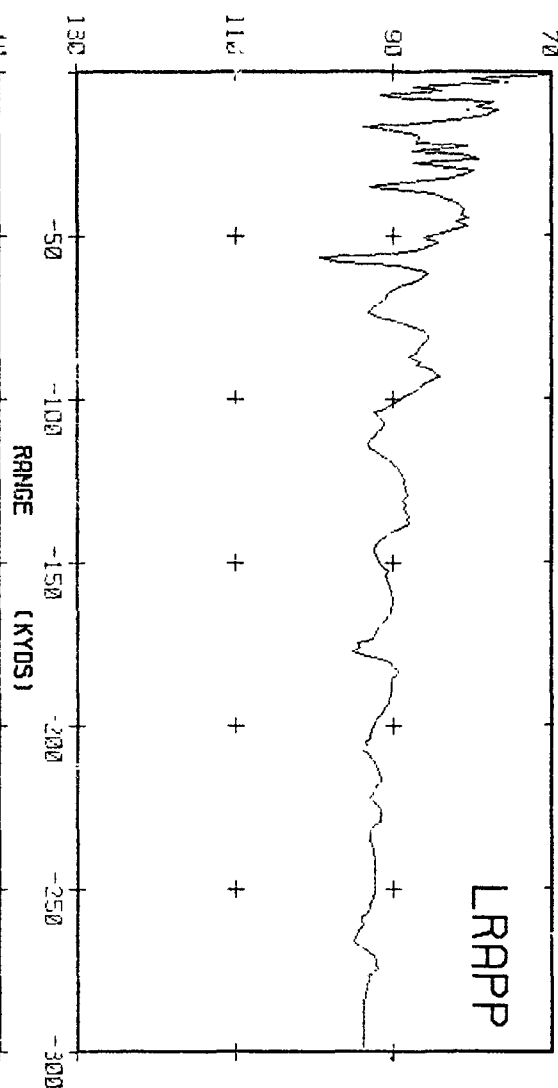


RRER 38 SUMMER

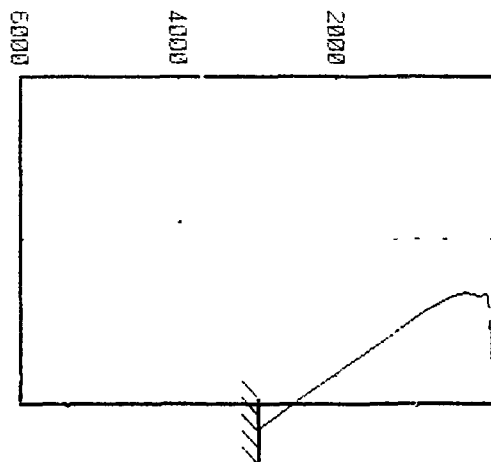
S 50 R 600 F 150

1450 M/S 1500 1550

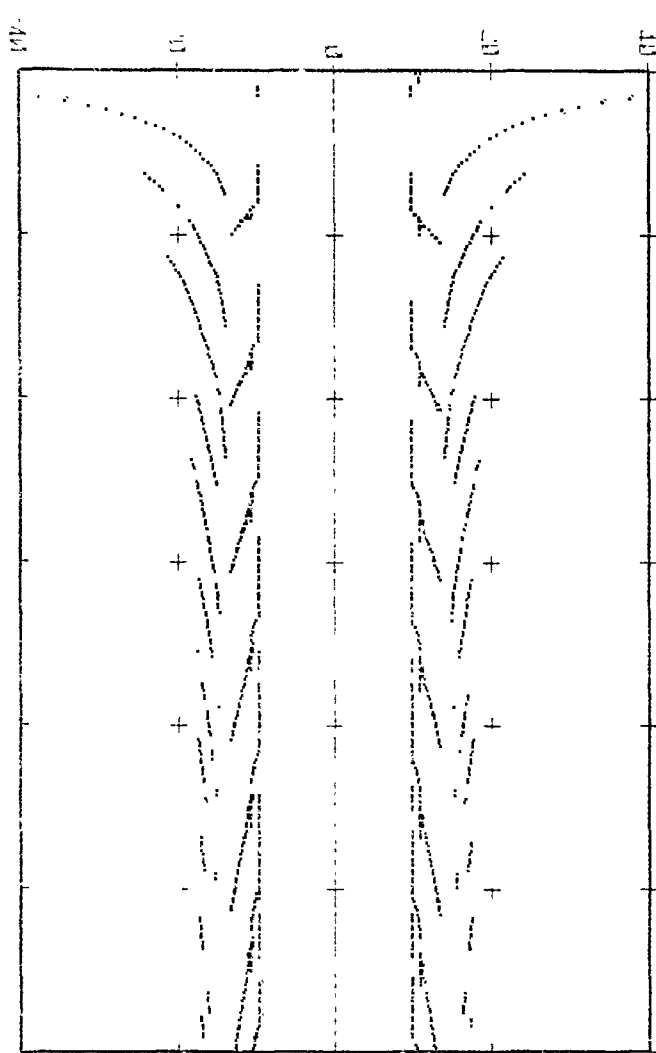
DB LOSS



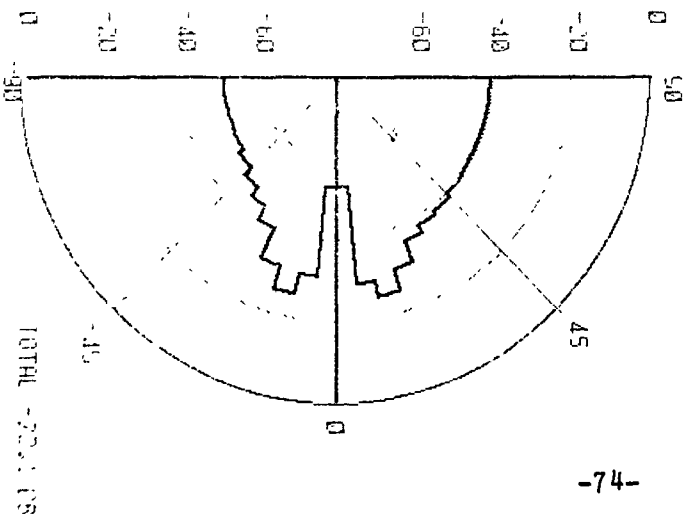
DEPTH IN METERS



ARRIVAL ANGLE



NOISE (DB)

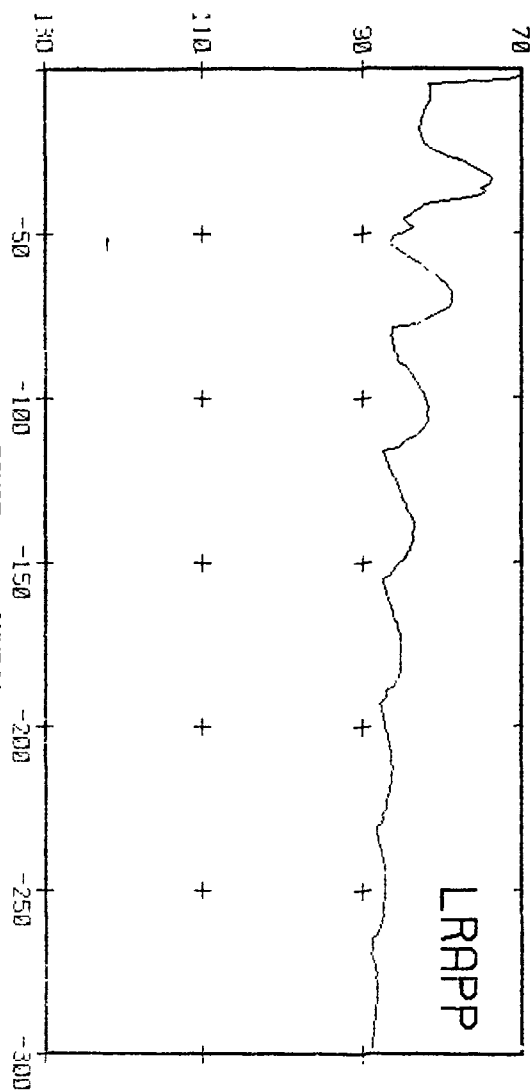


AREA 3B SUMMER

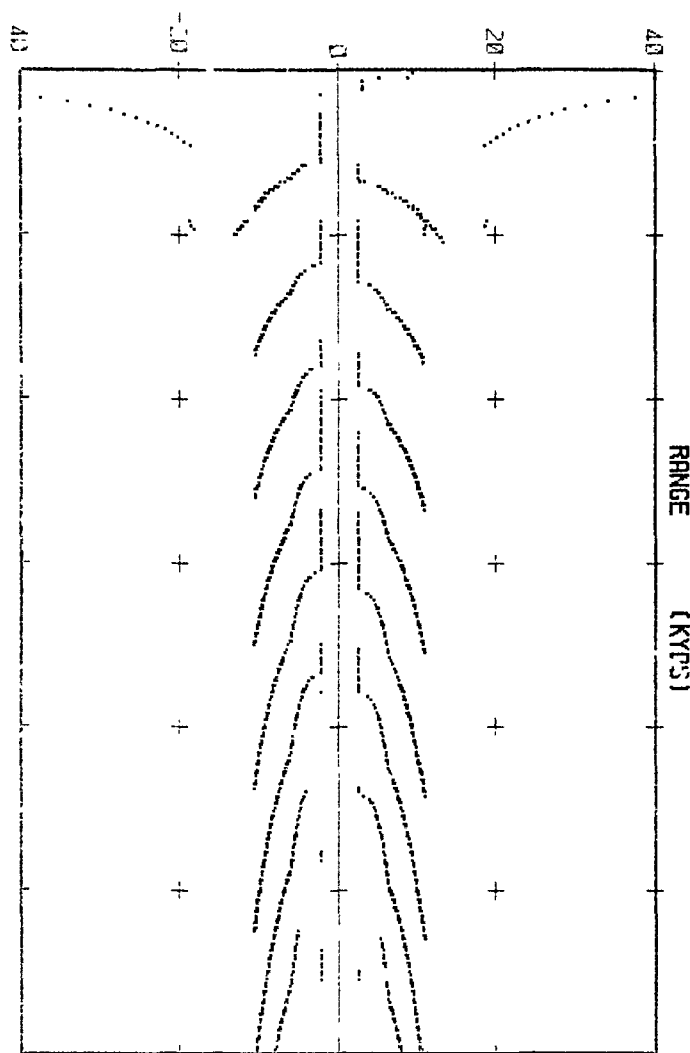
S 233 R 600 F 150

1450 M/S 1500 1550

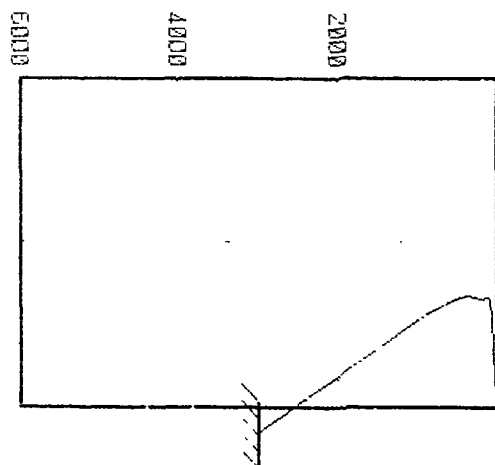
DB LOSS



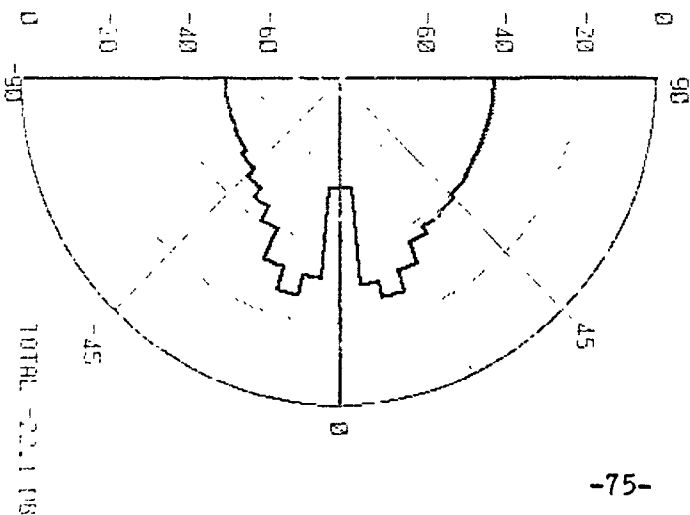
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



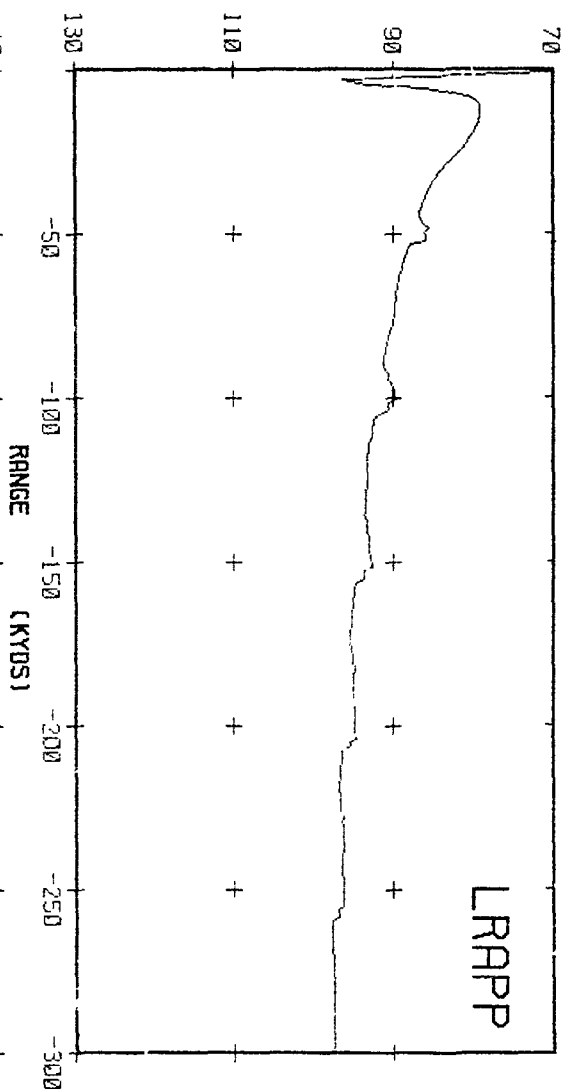
AREA 38 SUMMER

S 20 F 1000 F 150

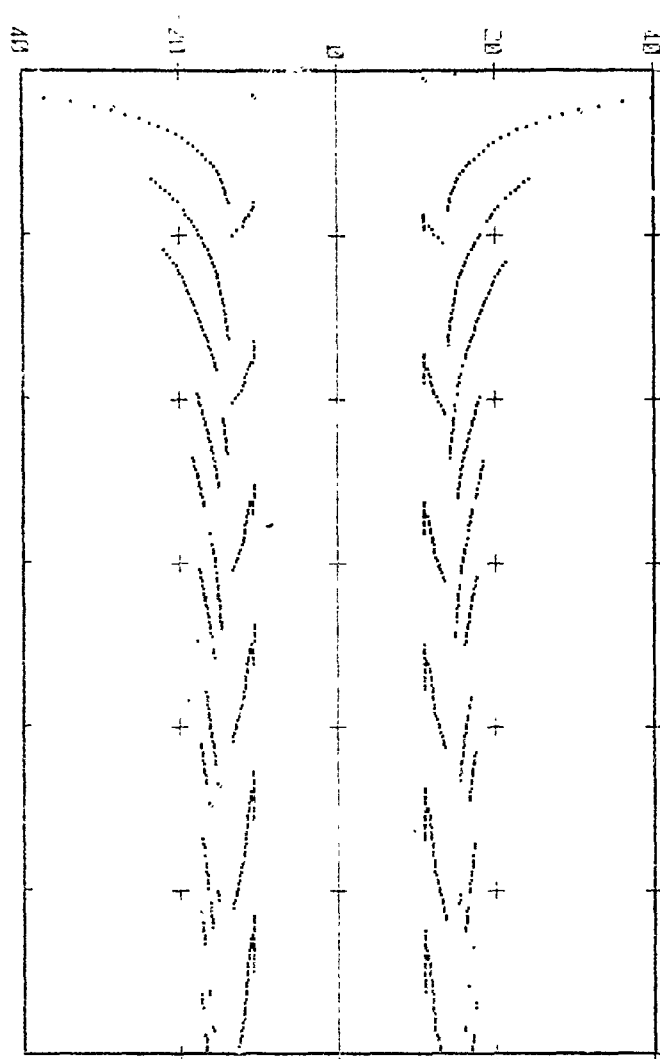
1450 M/S 1500

1550

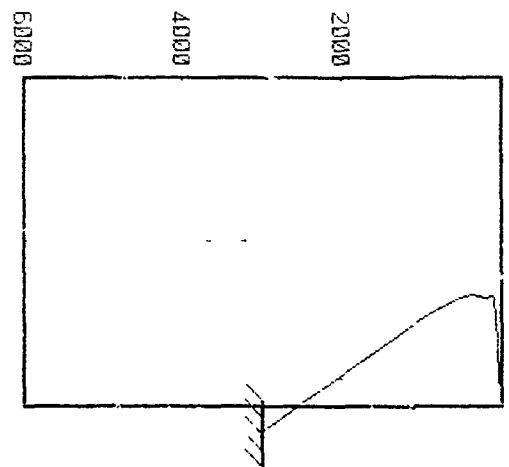
DB LOSS



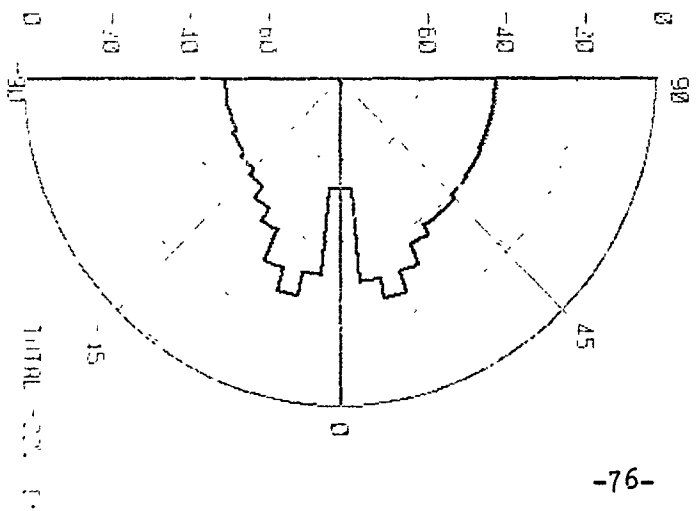
ARRIVAL ANGLE

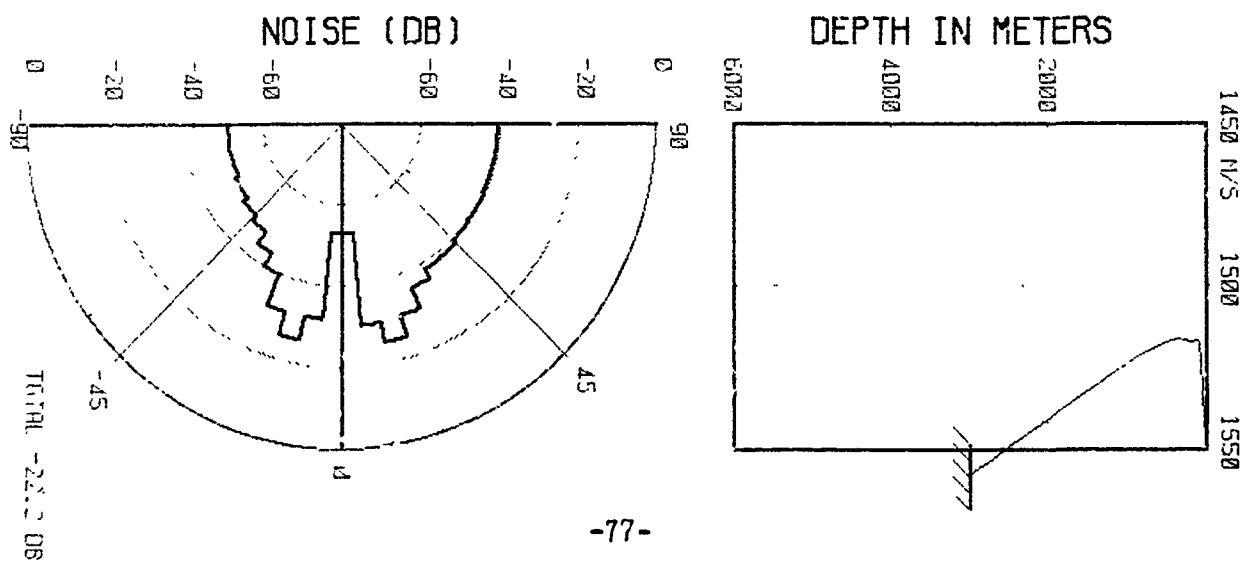
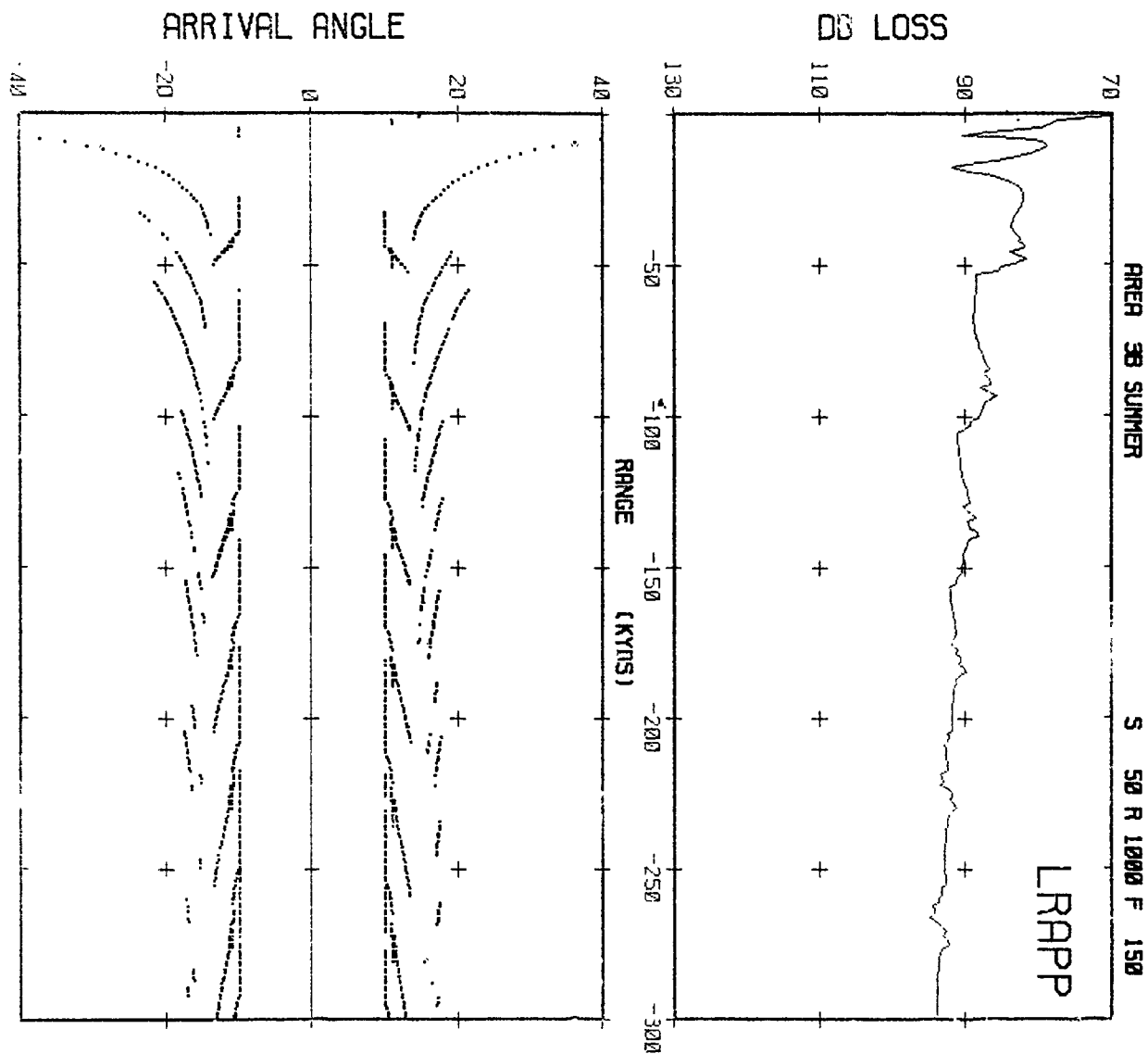


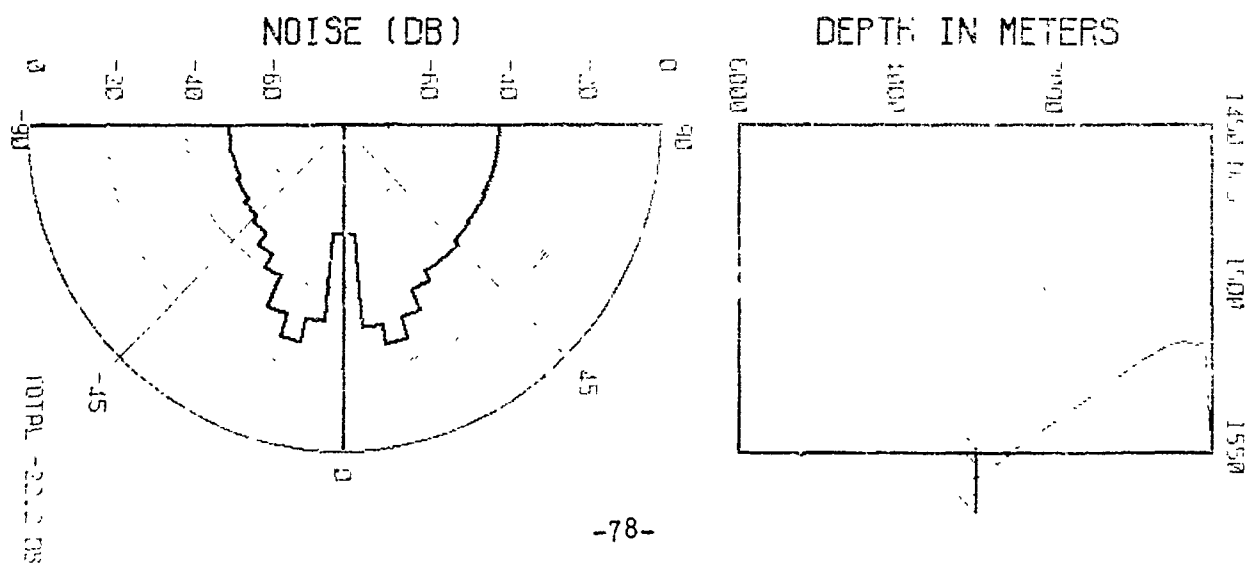
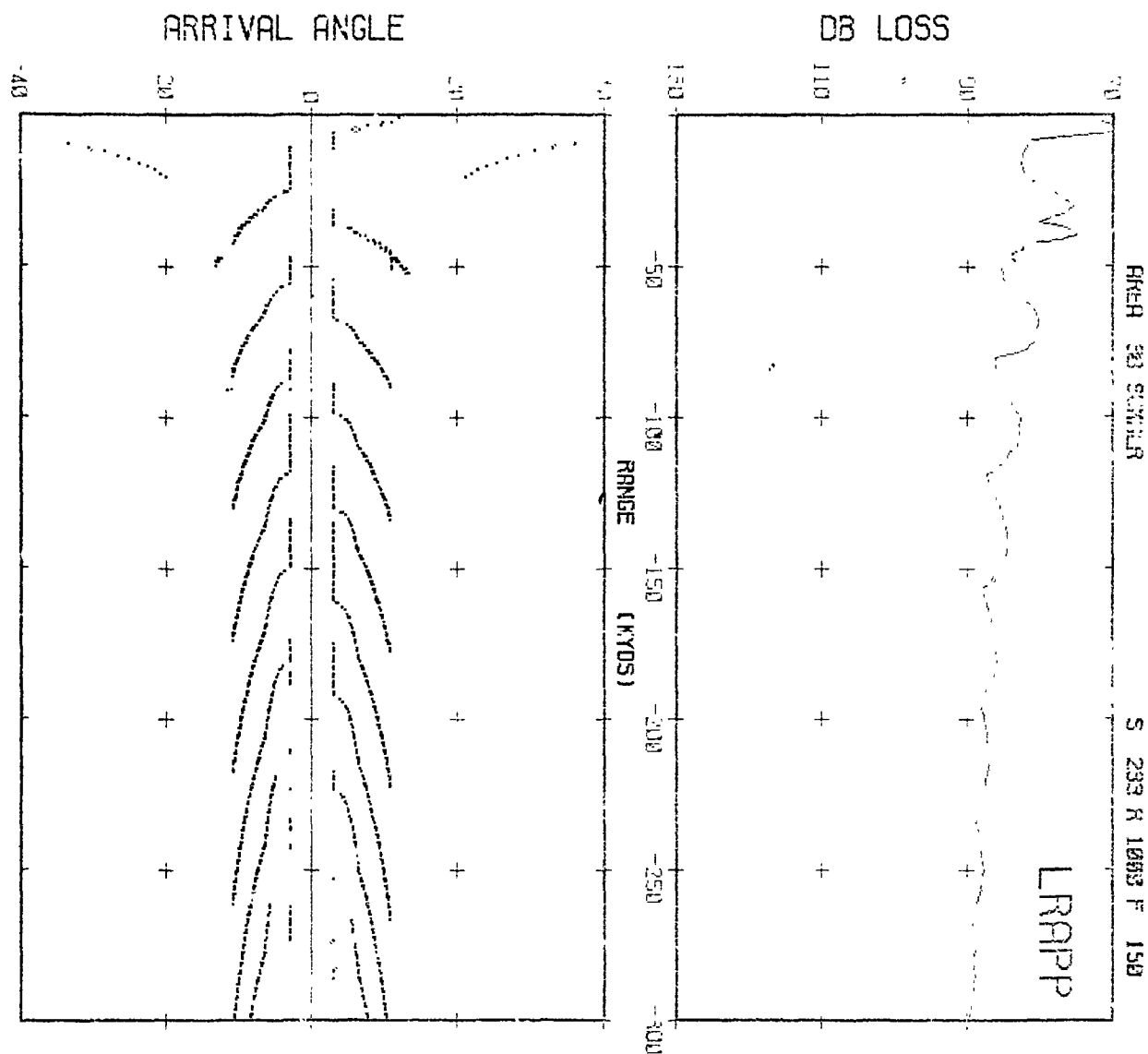
DEPTH IN METERS



NOISE (DB)







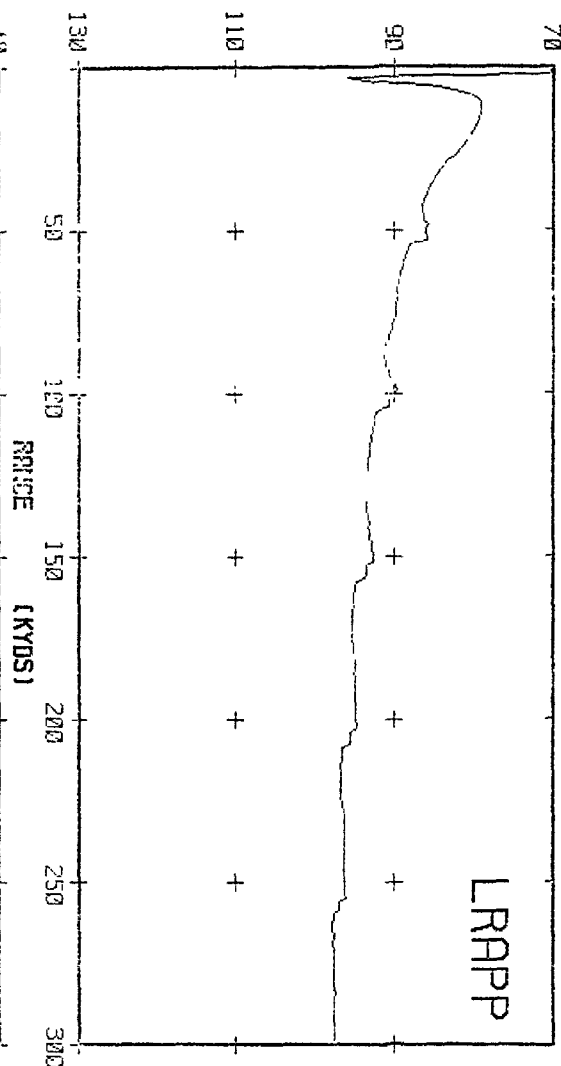


AREA 38 SUMMER

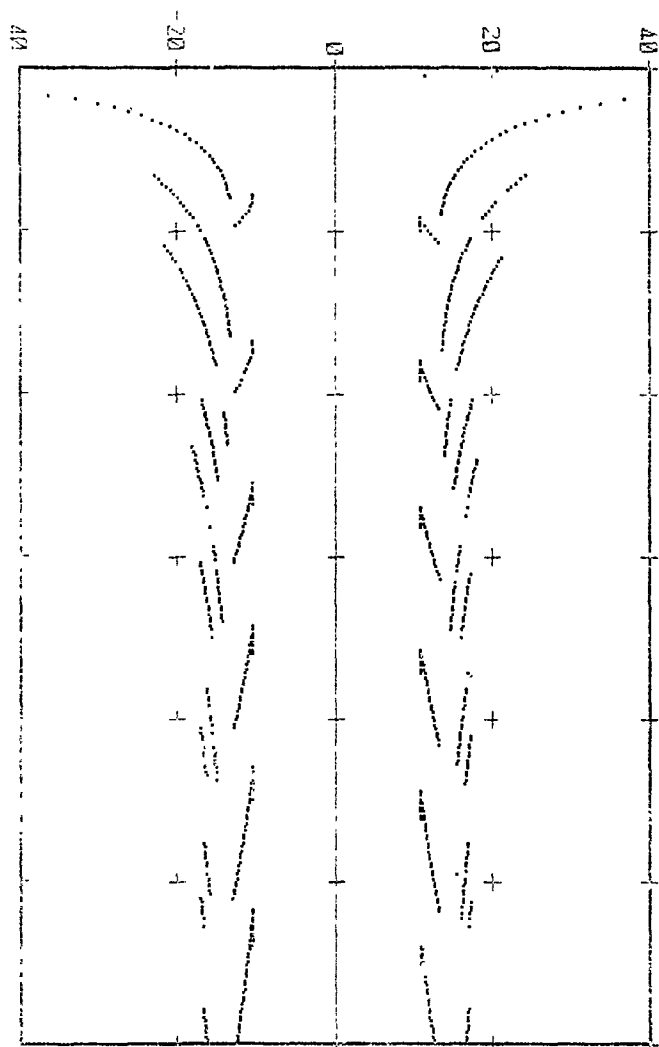
S 20 R 1500 F 150

1450 H 5 1500 1550

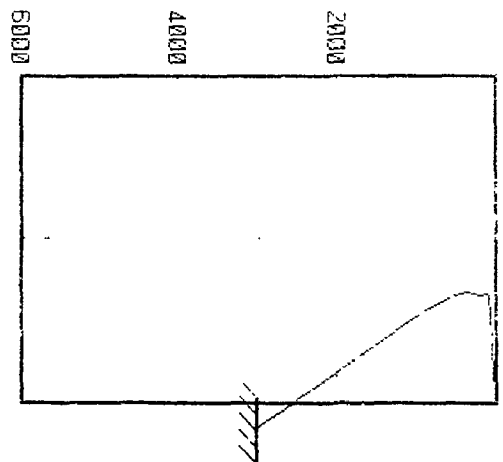
DB LOSS



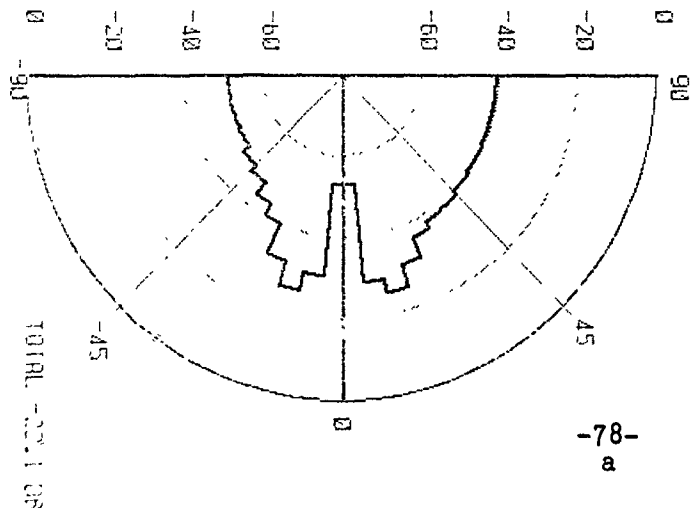
ARRIVAL ANGLE



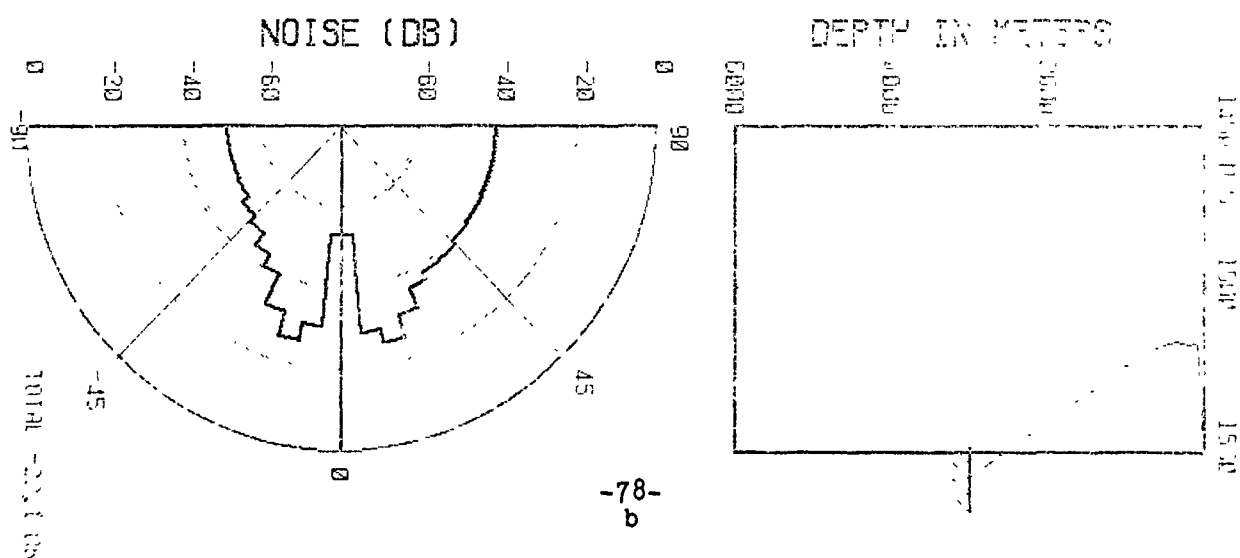
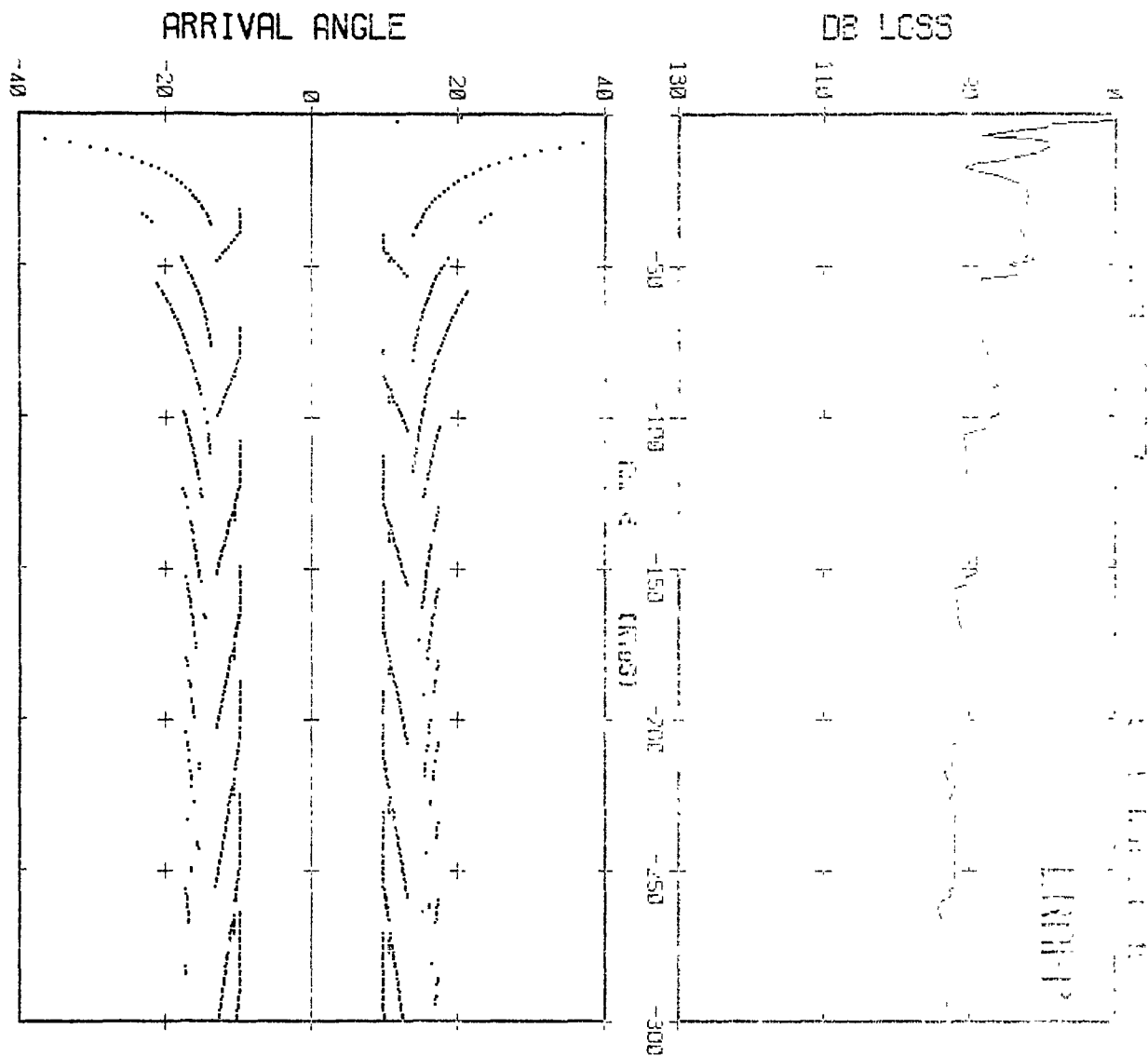
DEPTH IN METERS

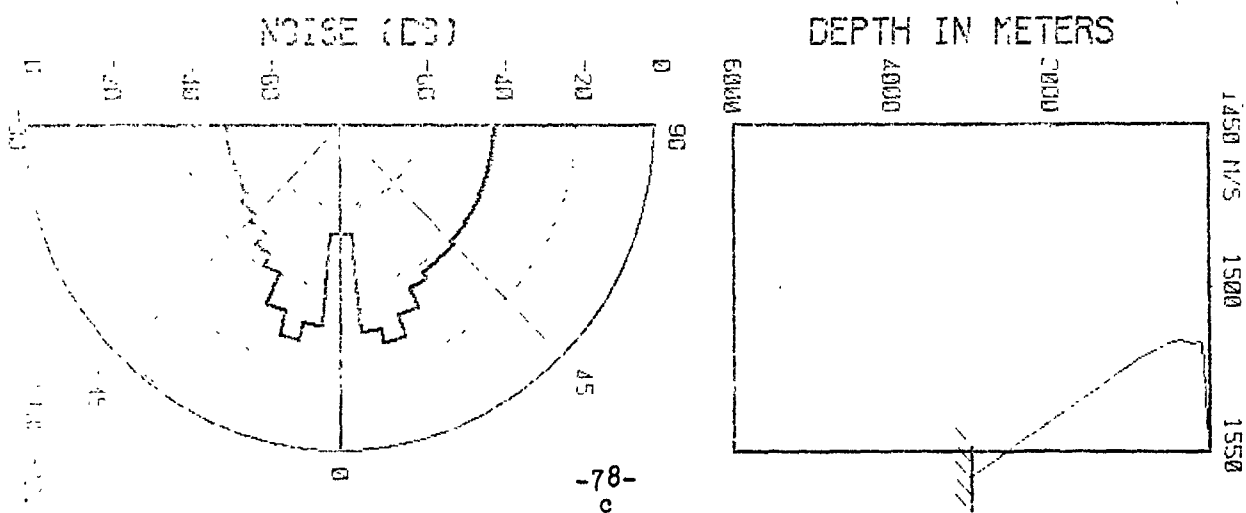
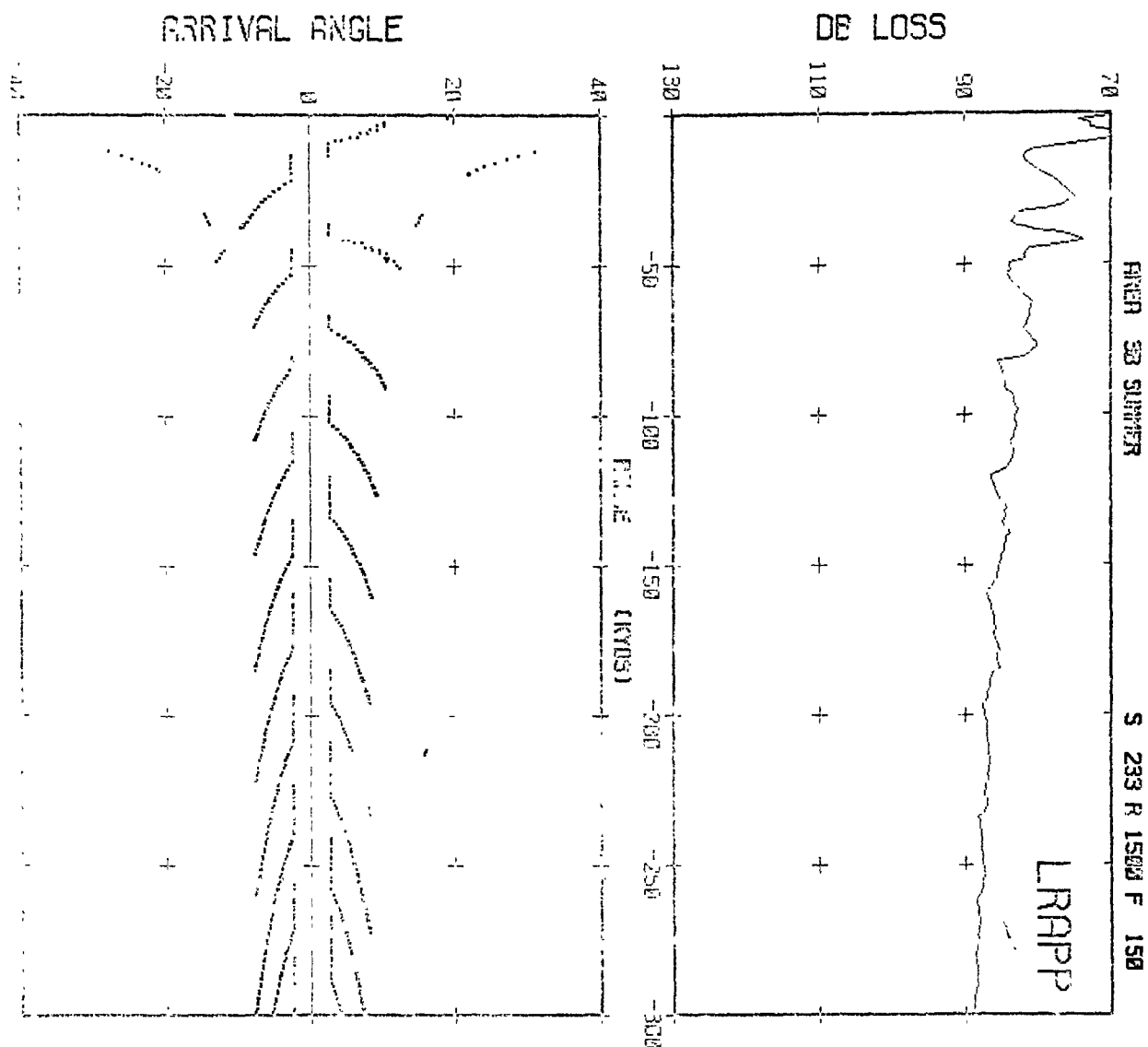


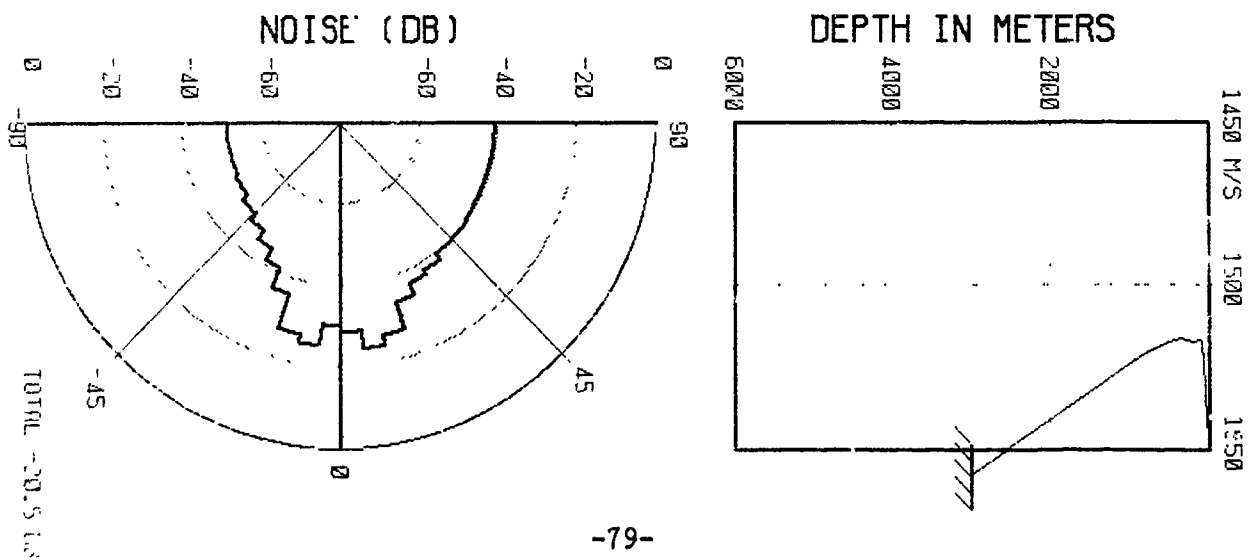
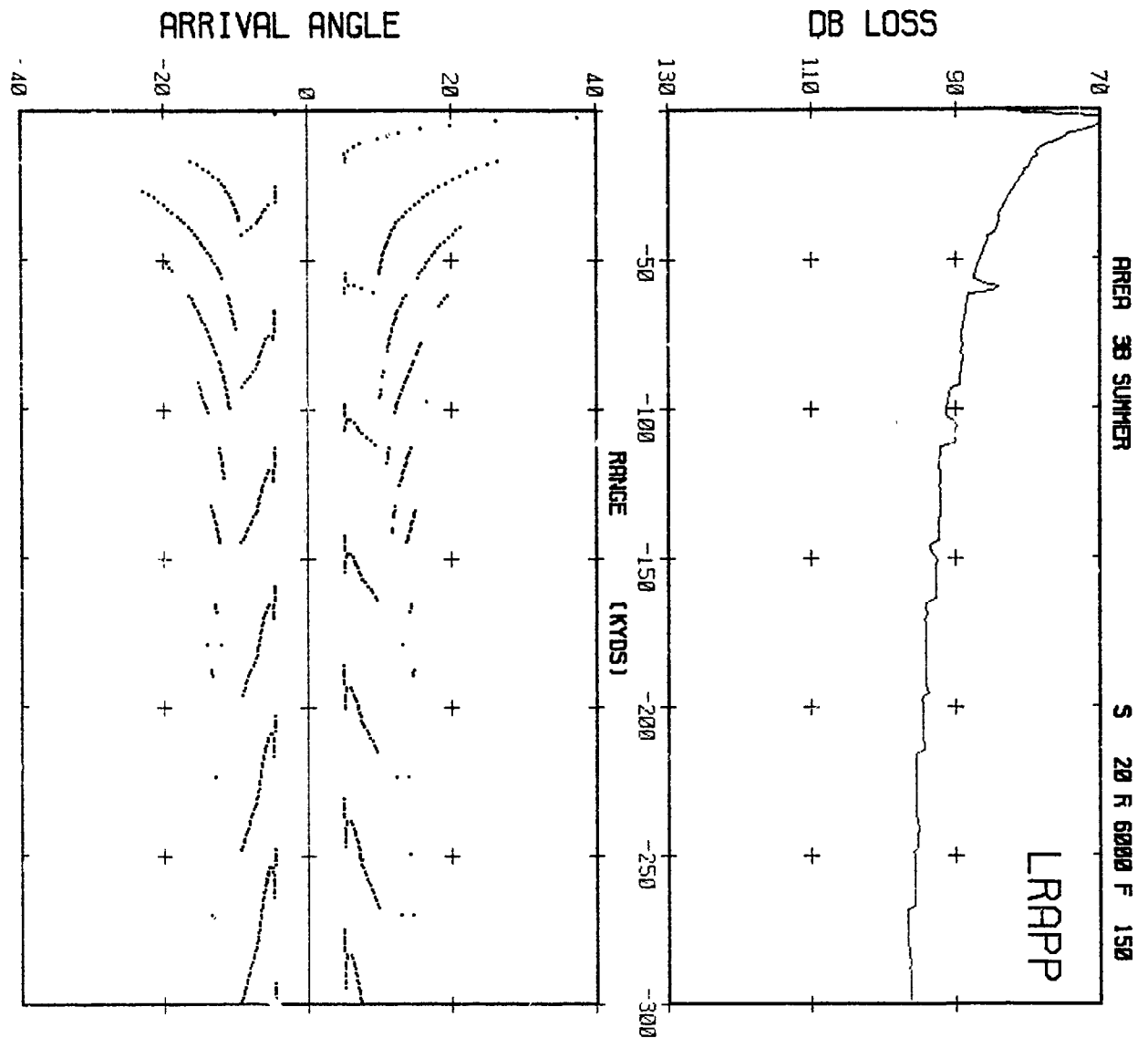
NOISE (DB)



-78-  
a







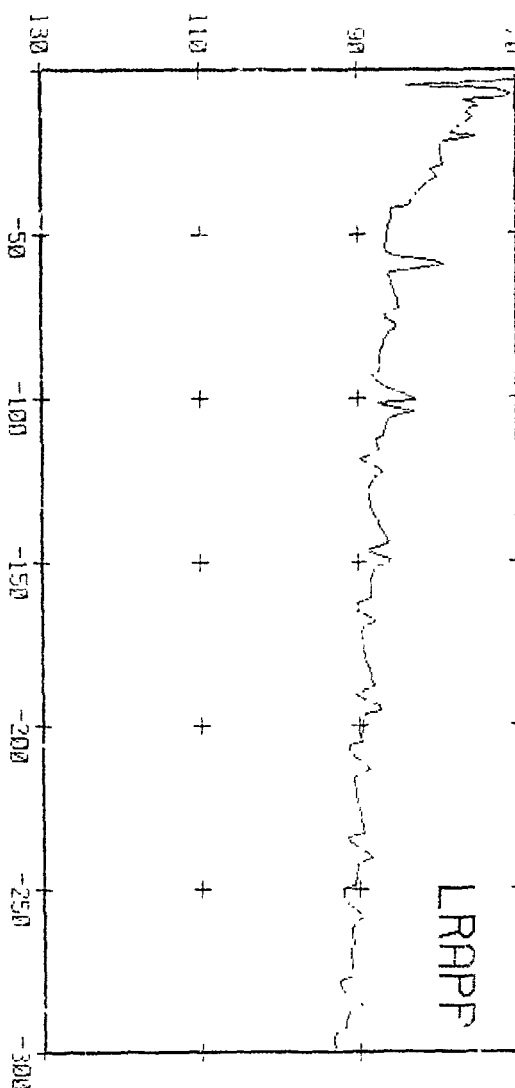
AREA 38 SUMMER

S 59 R 6000 F 150

1450 HRS 1500

1550

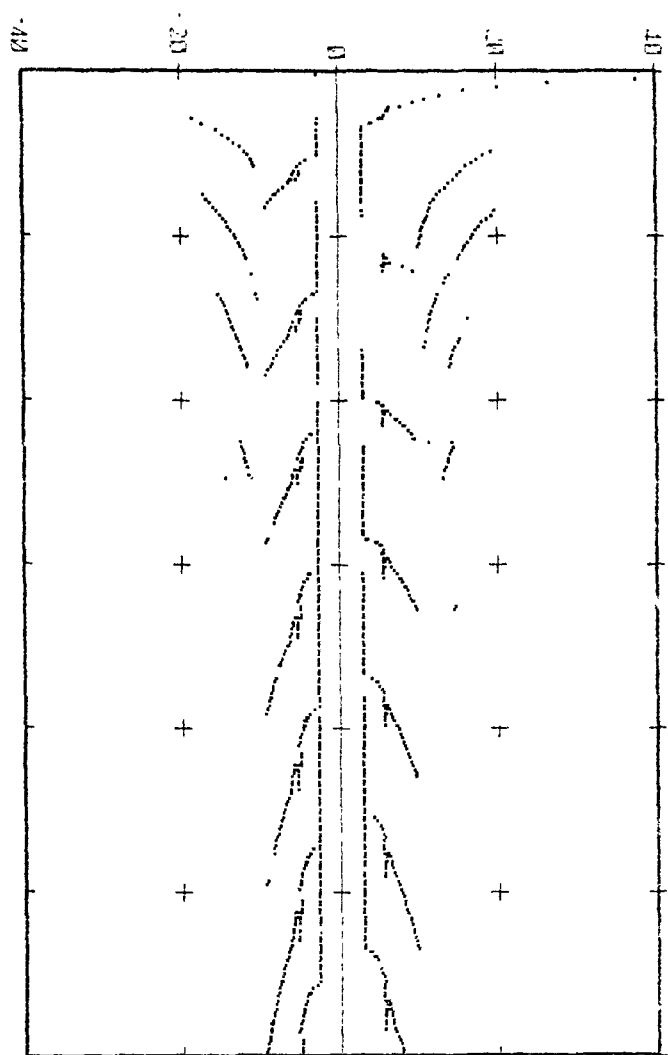
DB LOSS



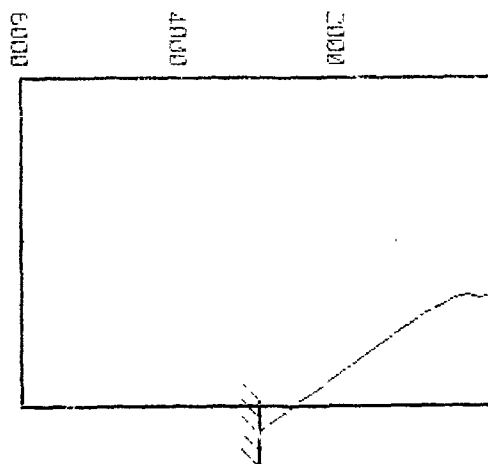
LRAPP

RANGE (KYDS)

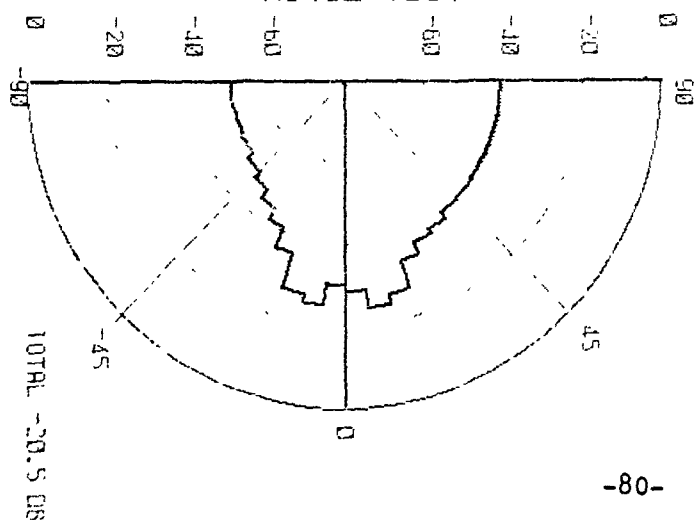
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

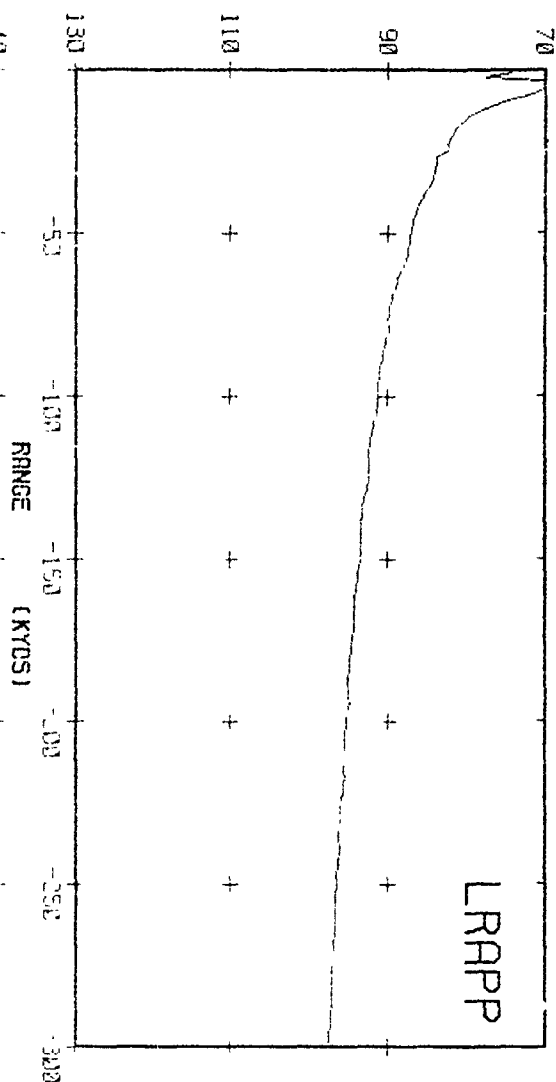




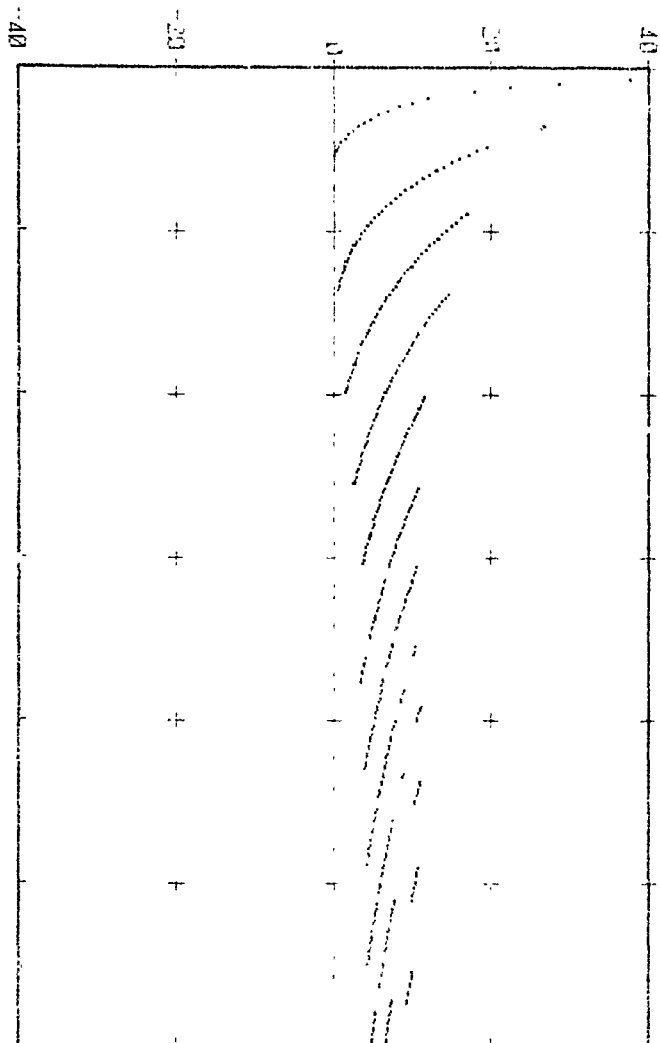
AREA 38 SUNDER

S 20 R 9842 F 150

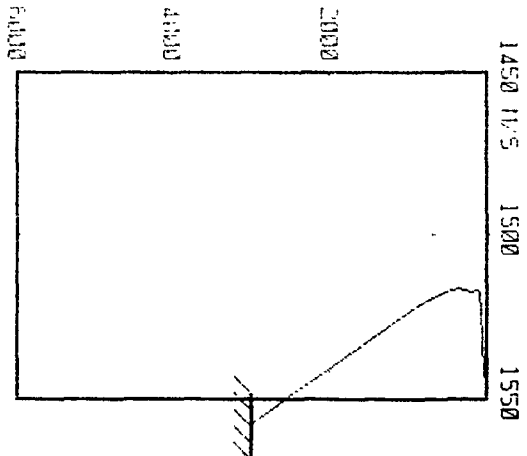
DB LOSS



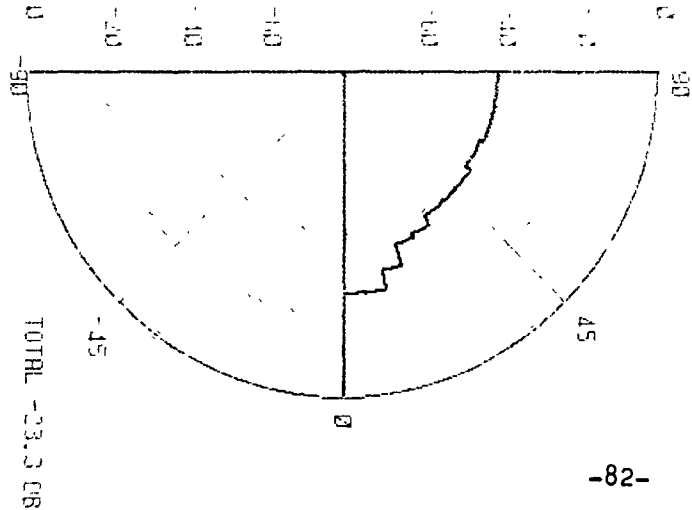
ARRIVAL ANGLE



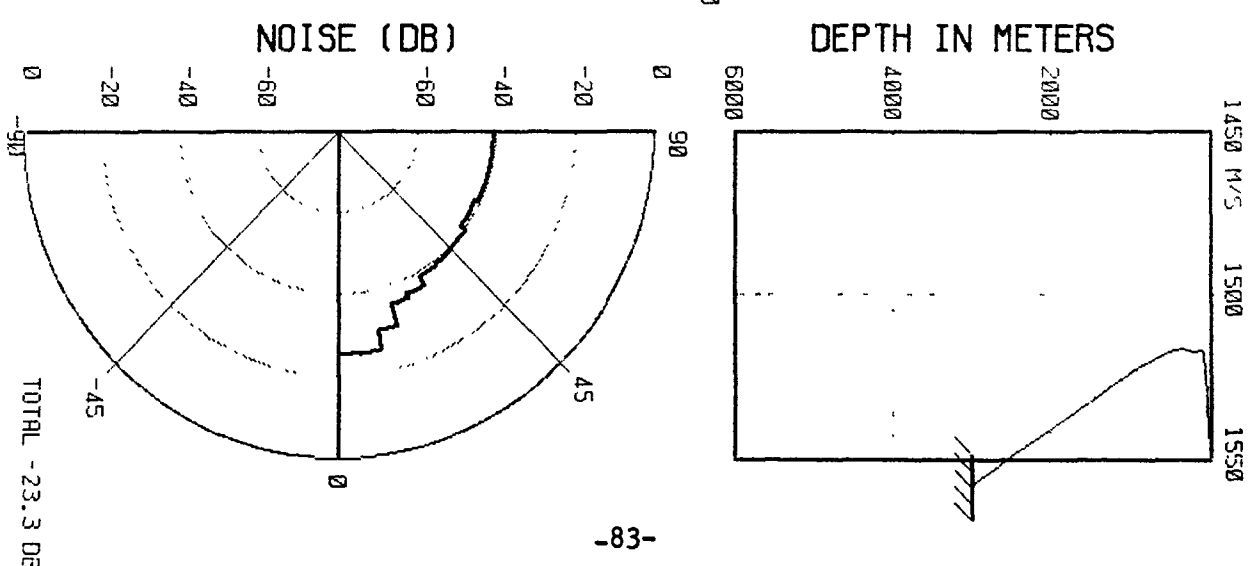
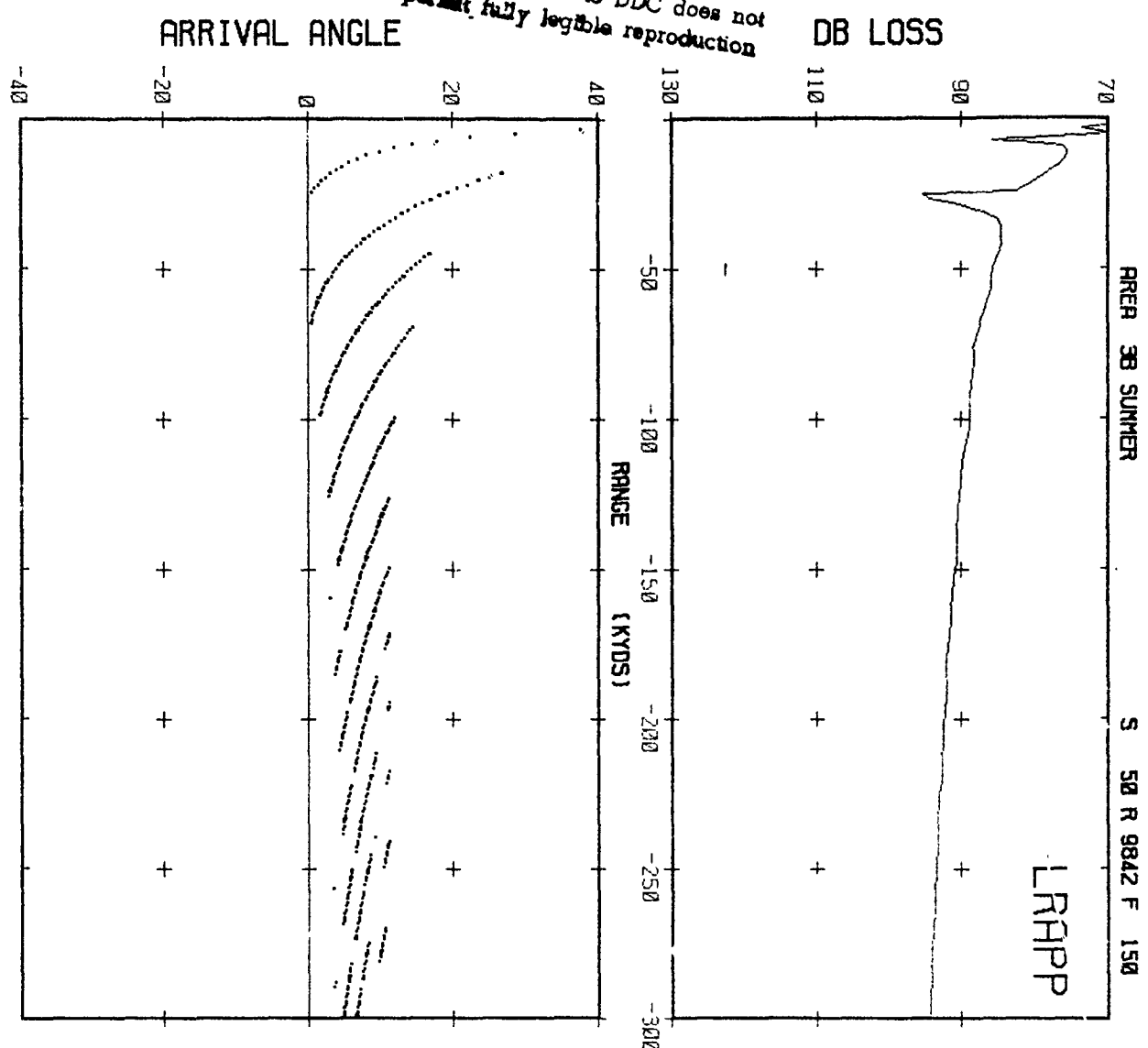
DEPTH IN METERS



NOISE (DB)



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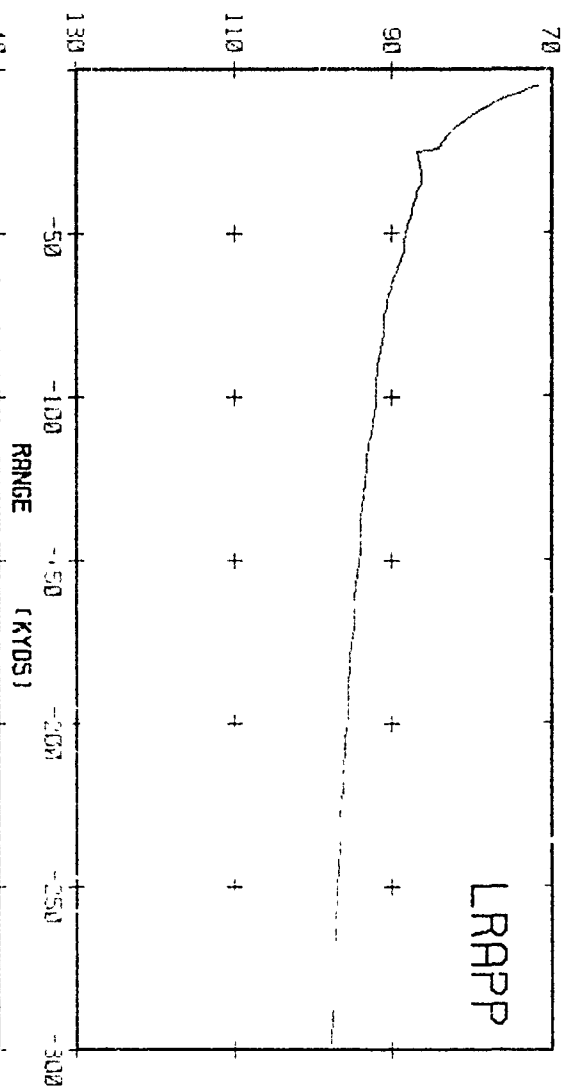


ARRER 36 SUMMER

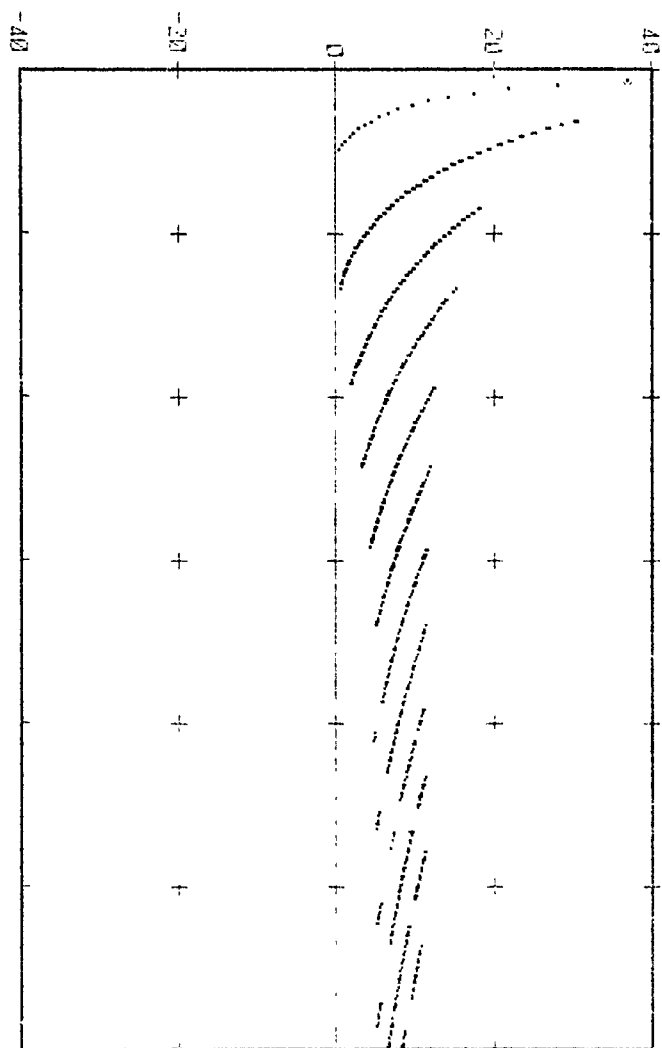
S 233 R 9842 F 150

1450 M/S 1500 1550

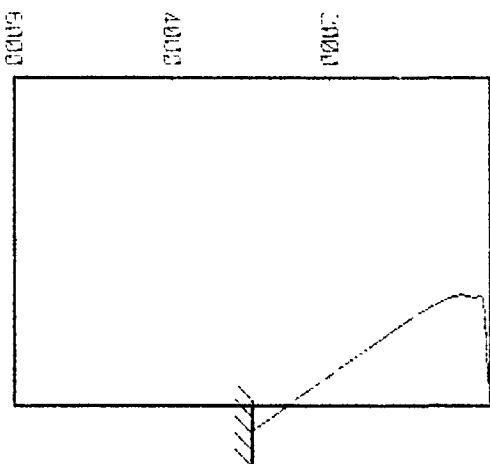
# DB LOSS



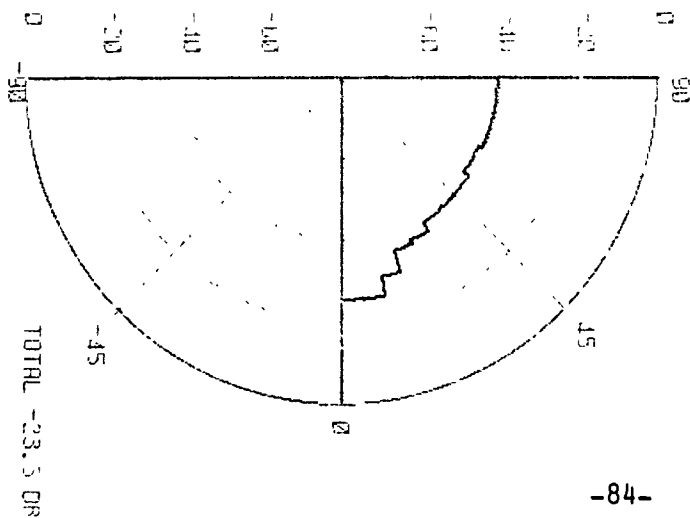
# ARRIVAL ANGLE

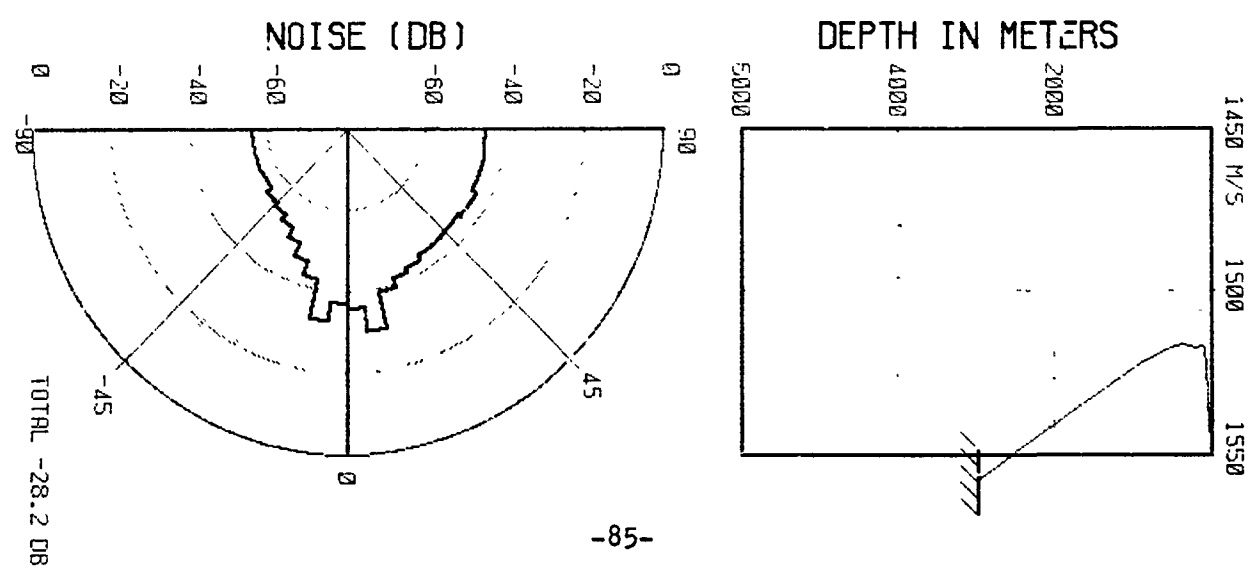
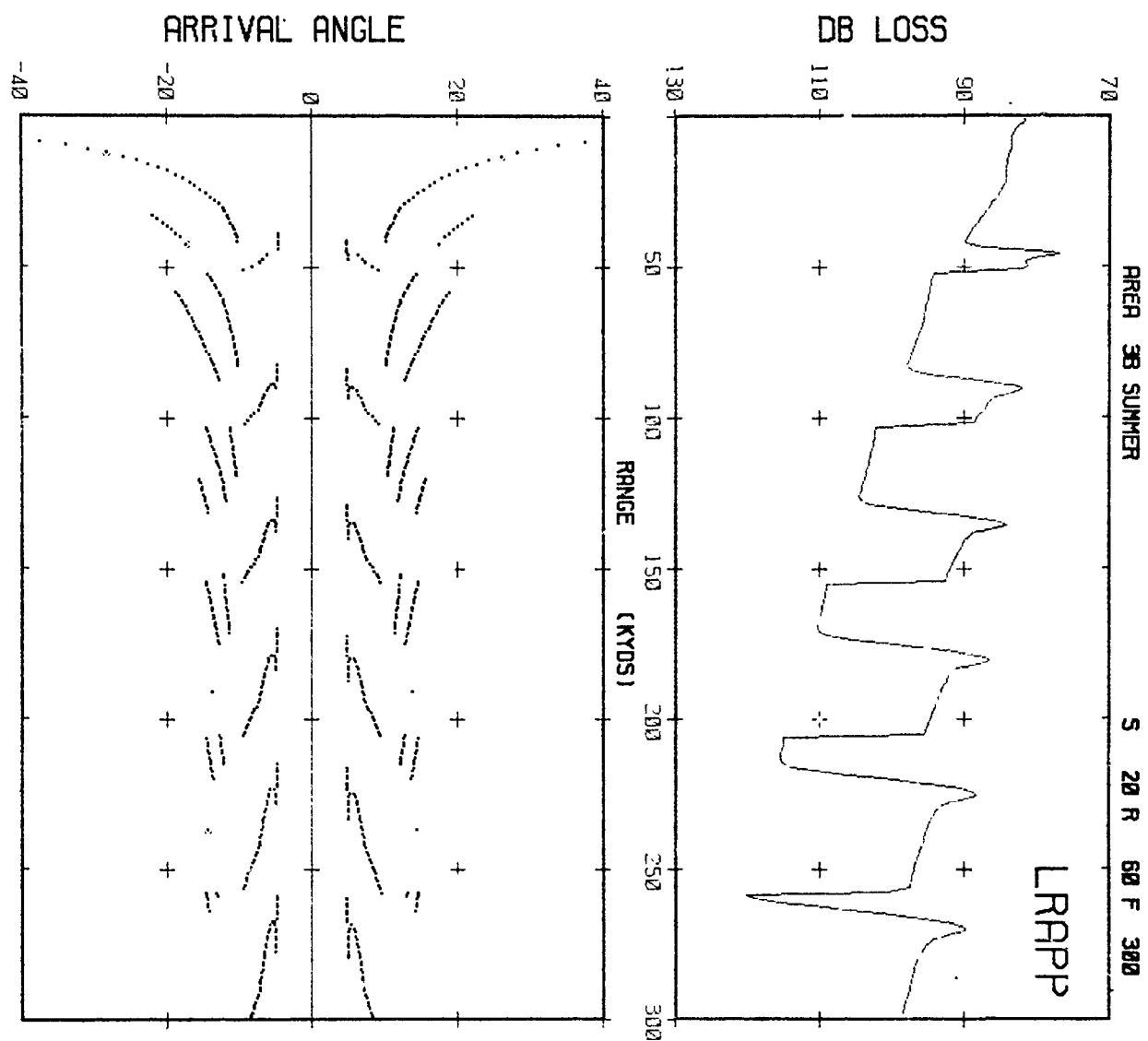


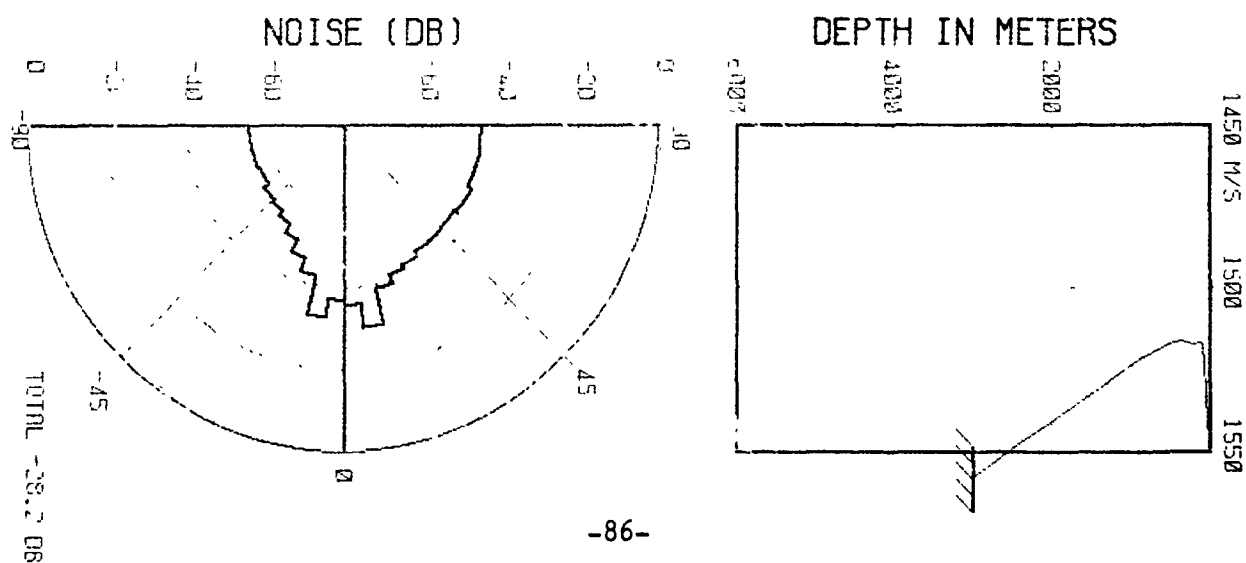
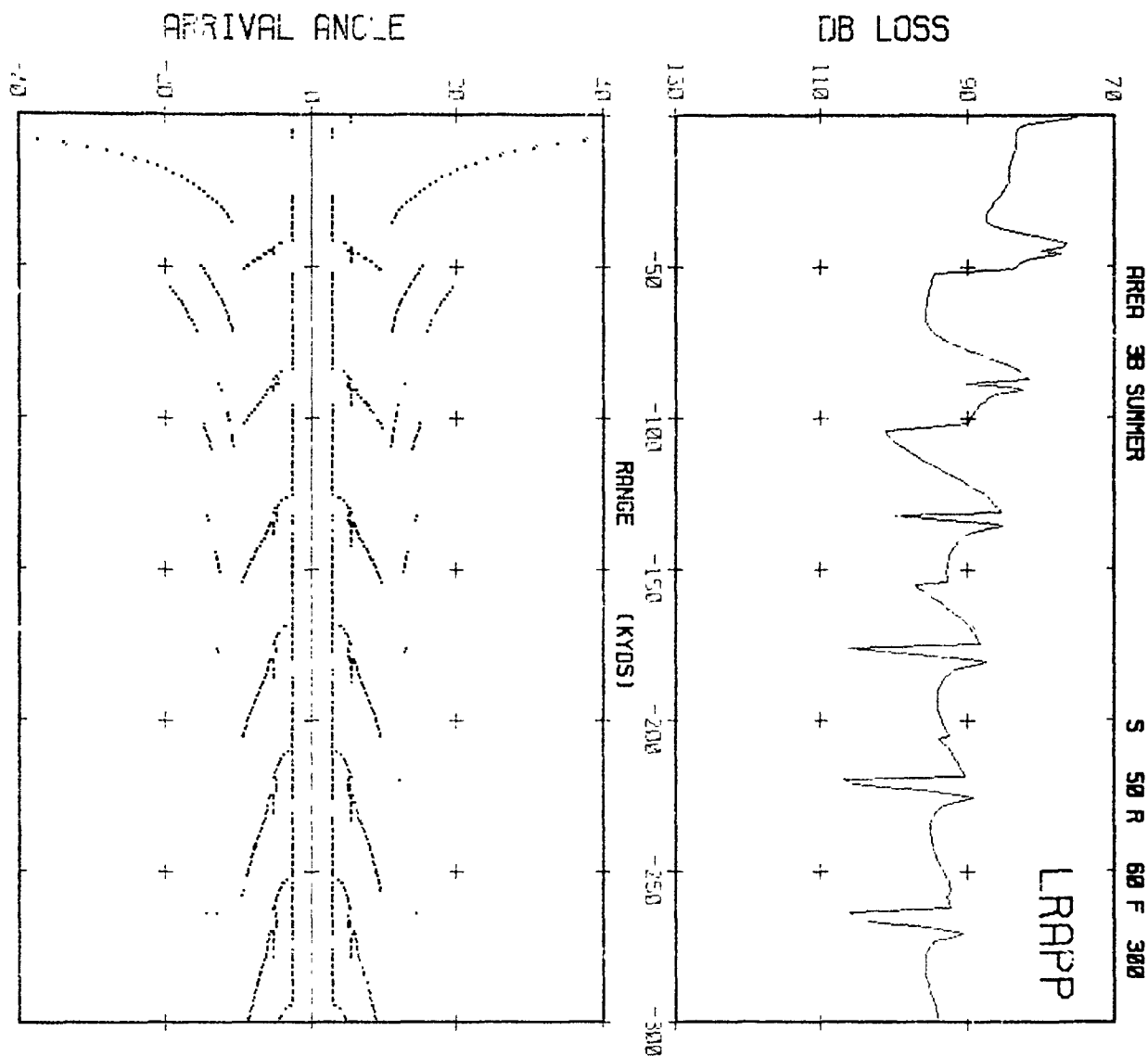
# DEPTH IN METERS



# NOISE (DB)





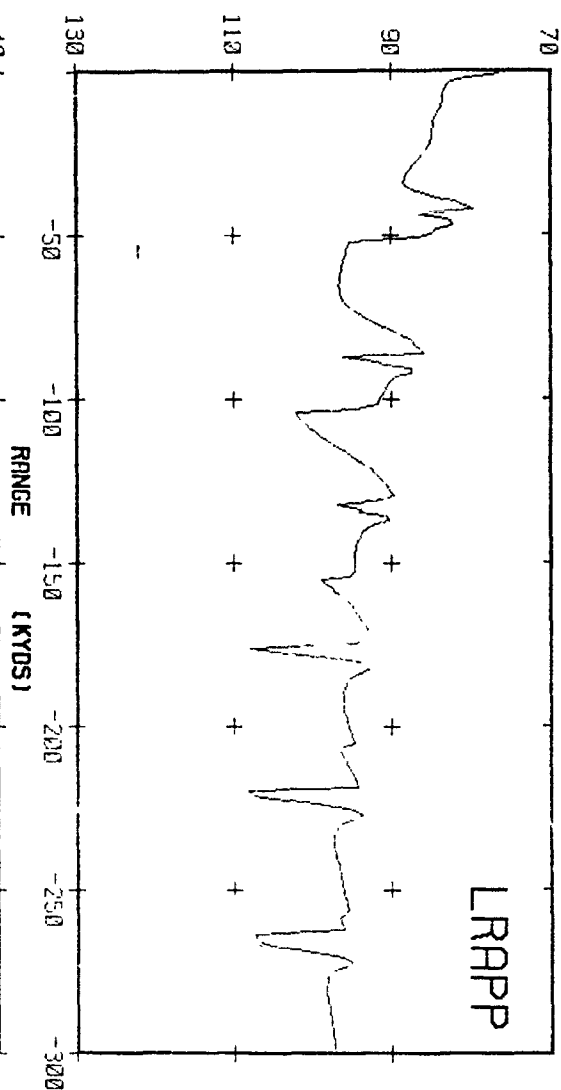


RRR 38 SUMMER

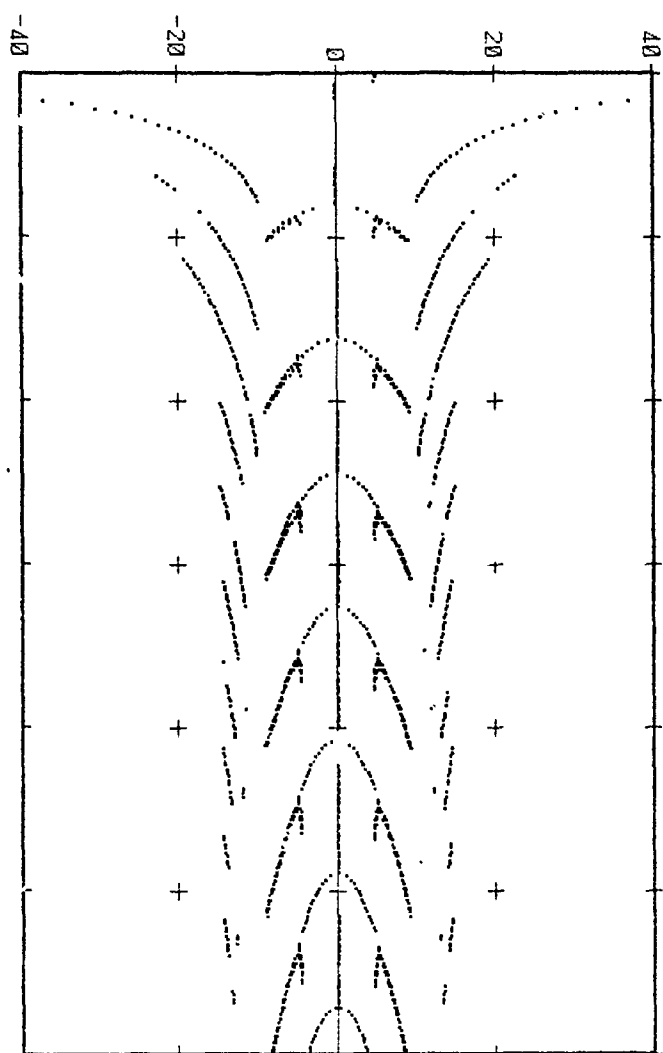
S 233 R 60 F 300

1450 11/5 1500 1550

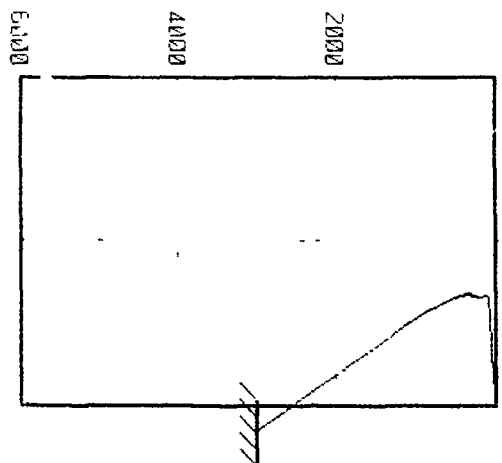
DB LOSS



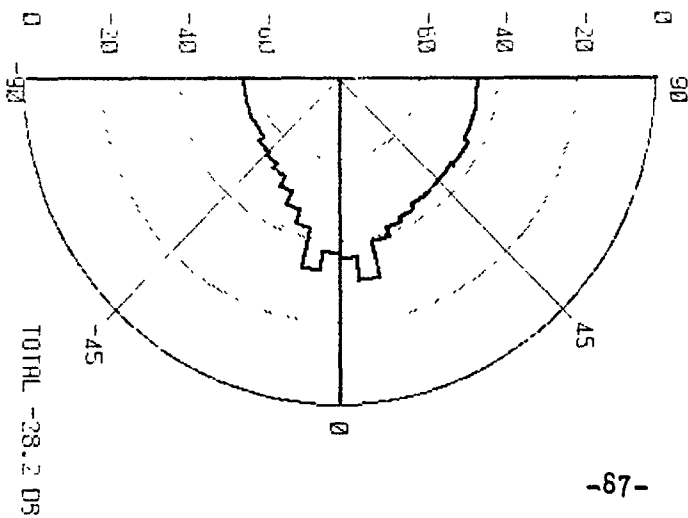
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



AREA 38 SUMMER

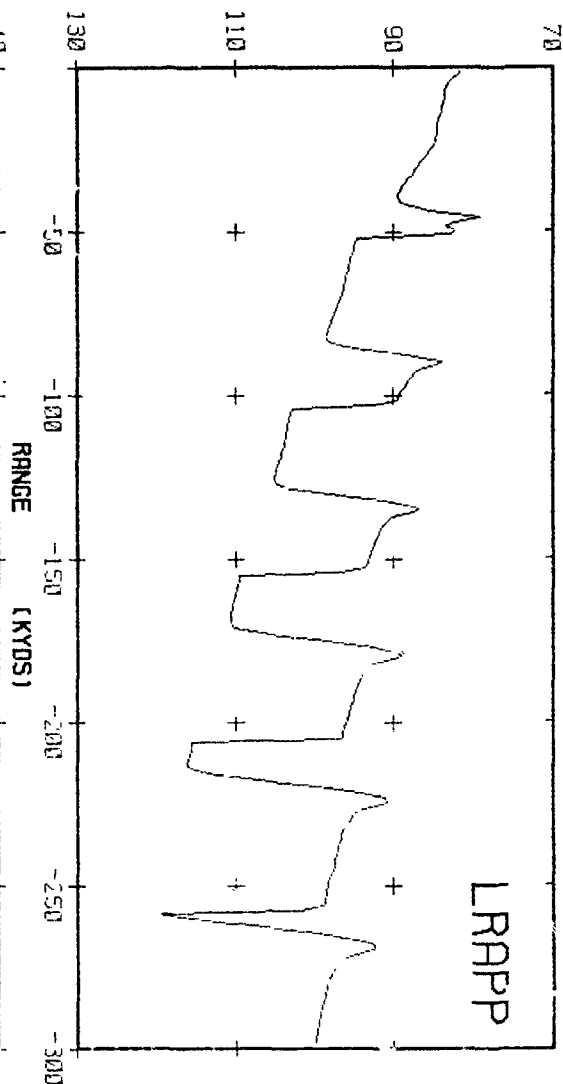
S 20 R 133 F 300

1450 11/5

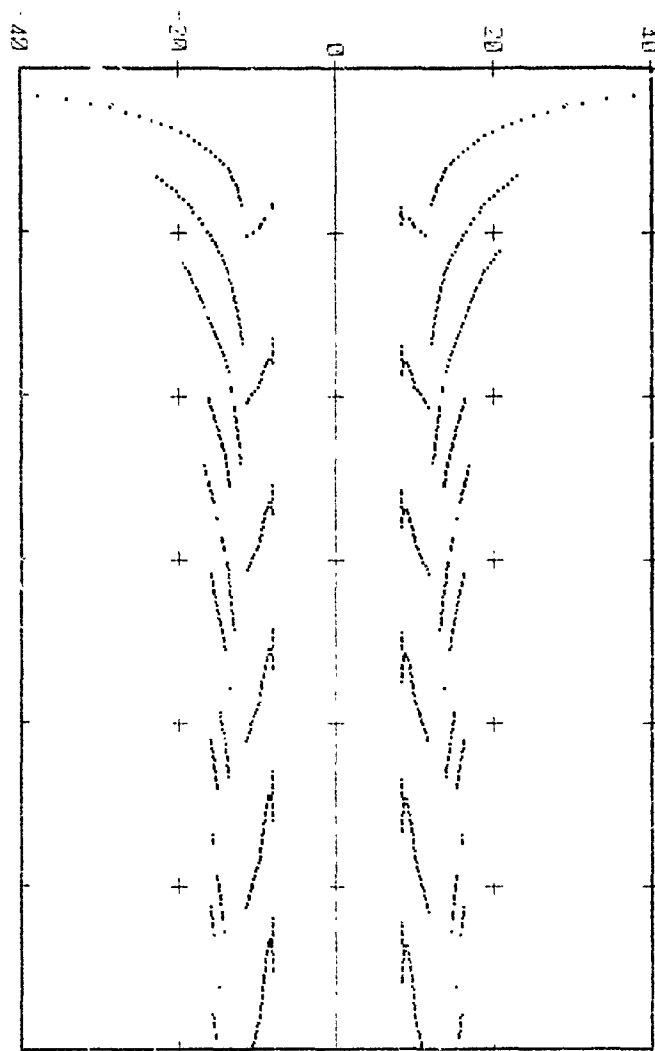
1500

1550

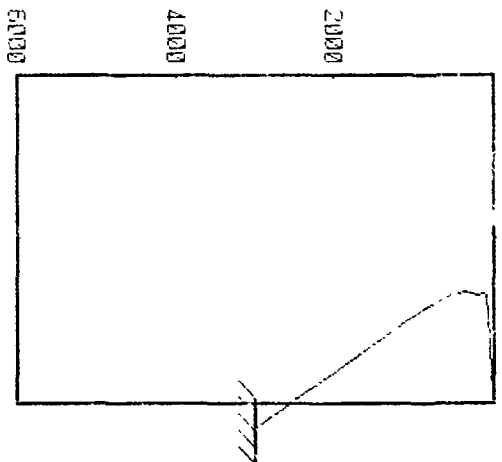
DB LOSS



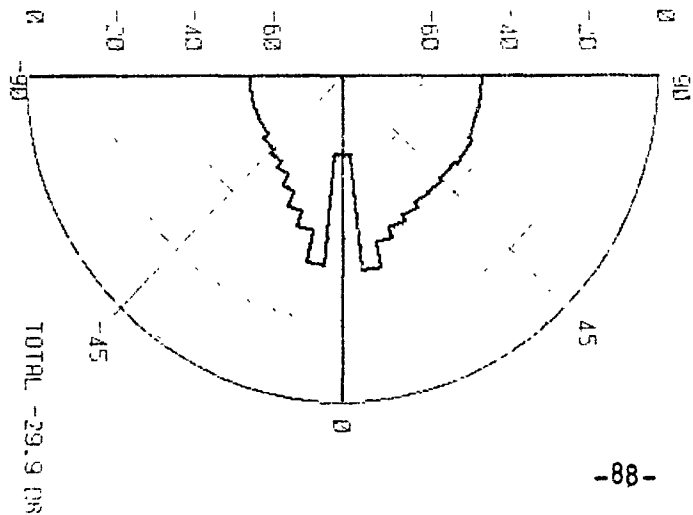
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

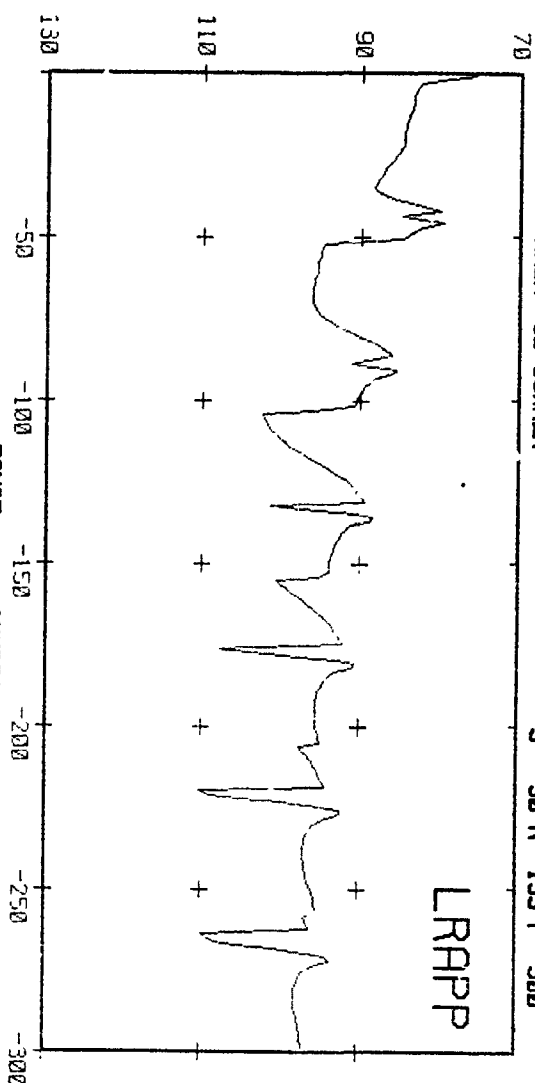


AREA 3B SUMMER

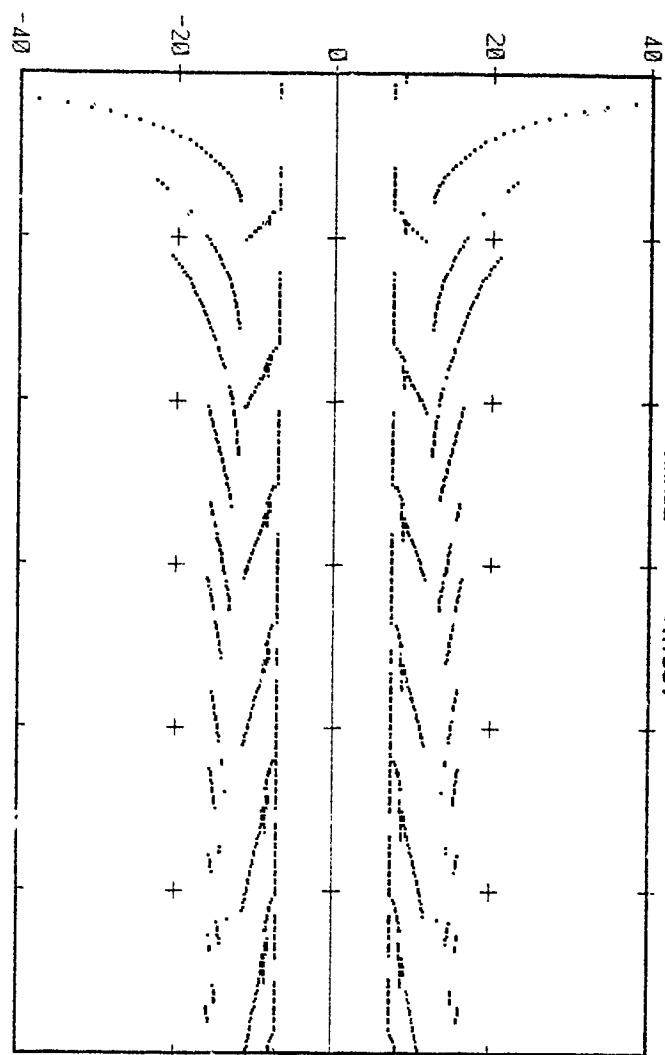
S 50 R 133 F 300

LRAPP

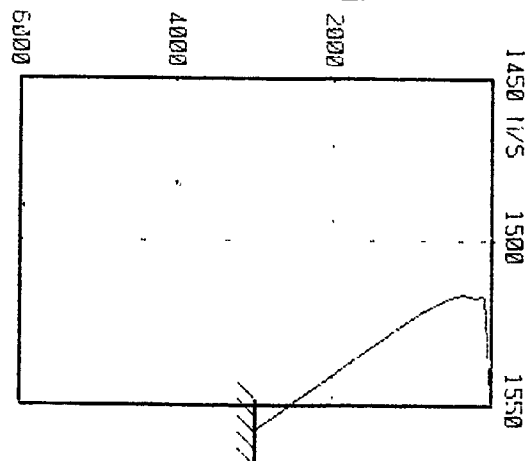
DB LOSS



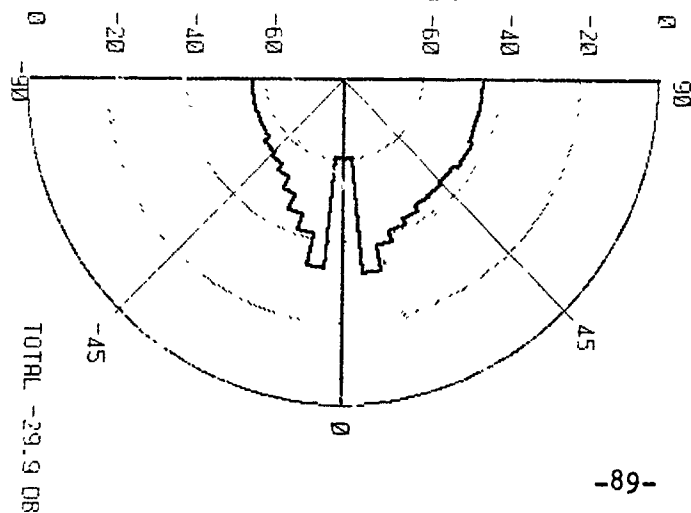
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

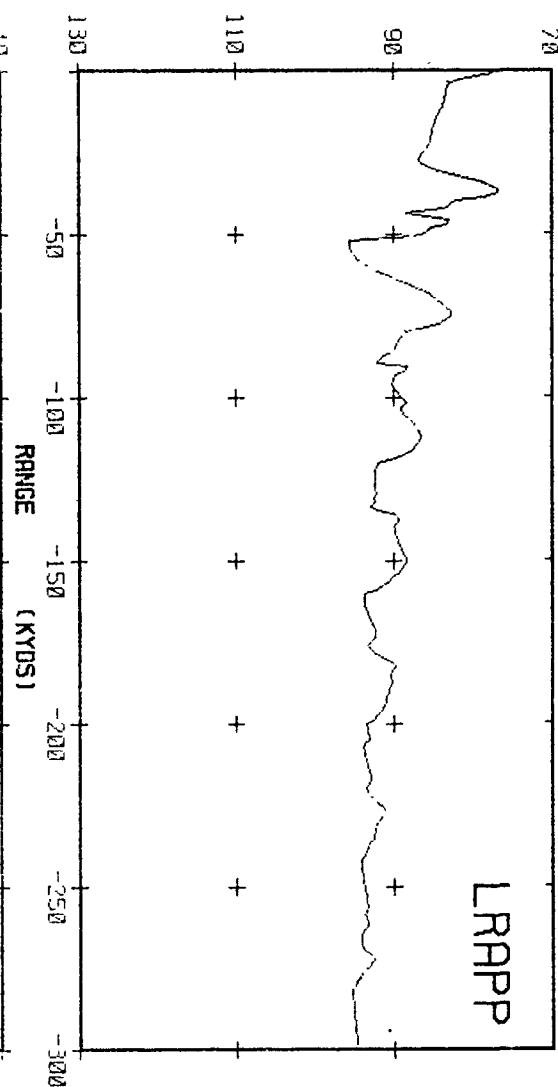


AREA 38 SUMMER

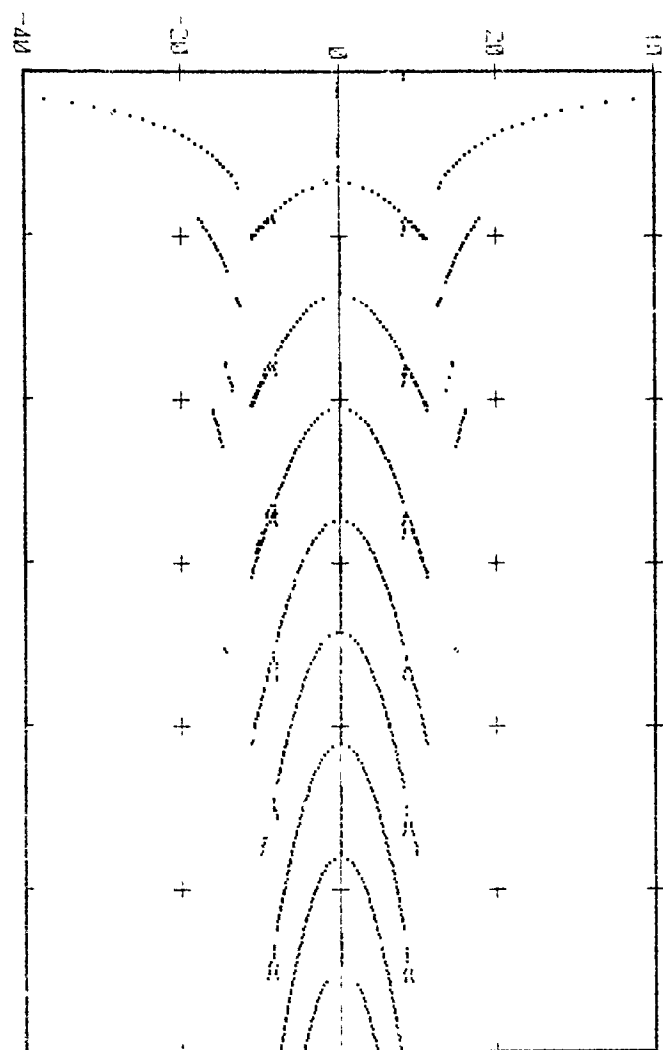
S 233 R 133 F 300

LRAPP

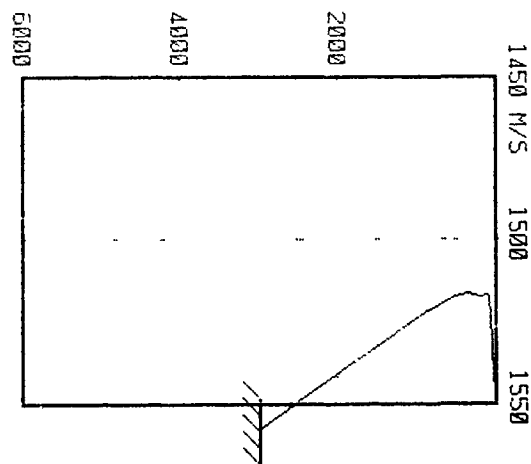
DB LOSS



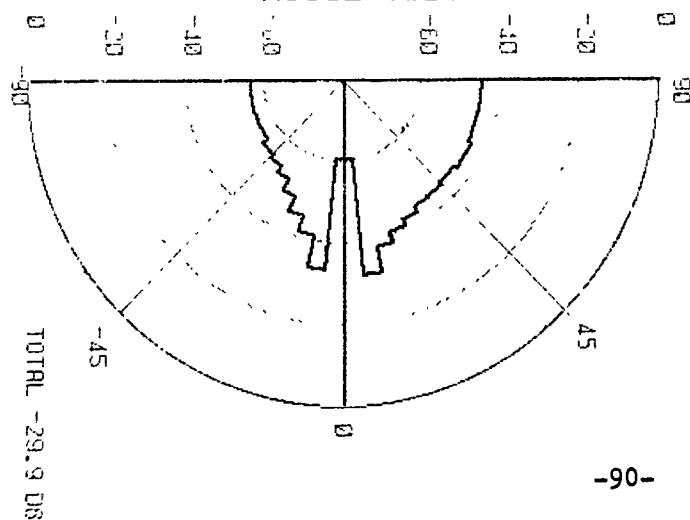
BEFIVAL ANGLE

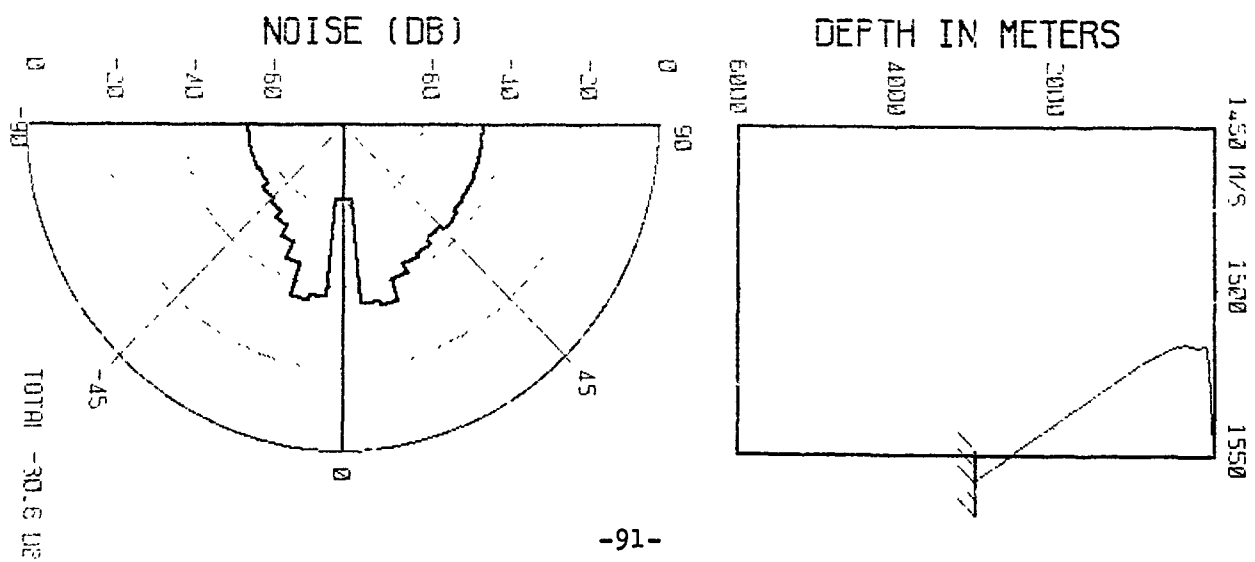
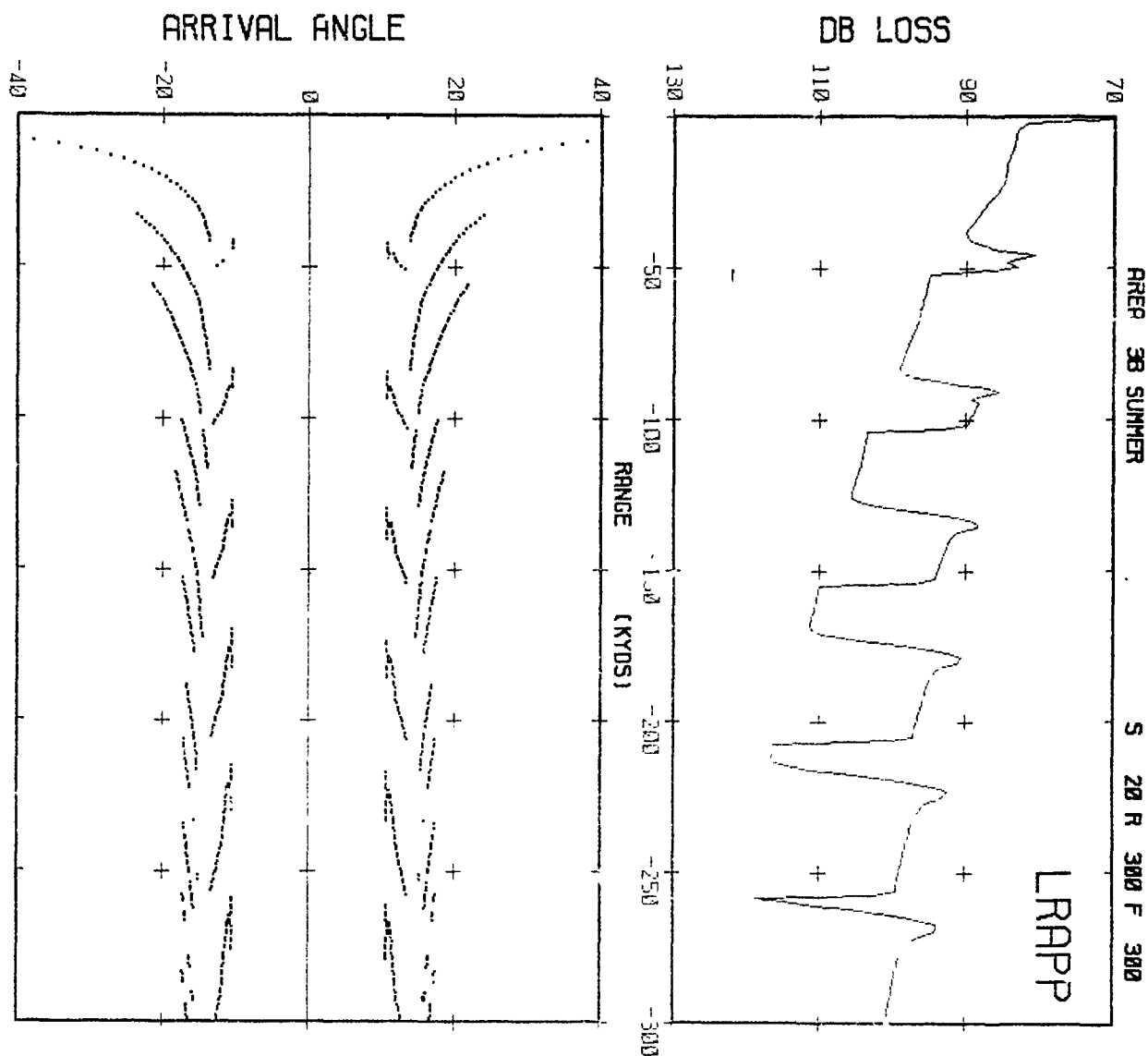


DEPTH IN METERS



NOISE (DB)

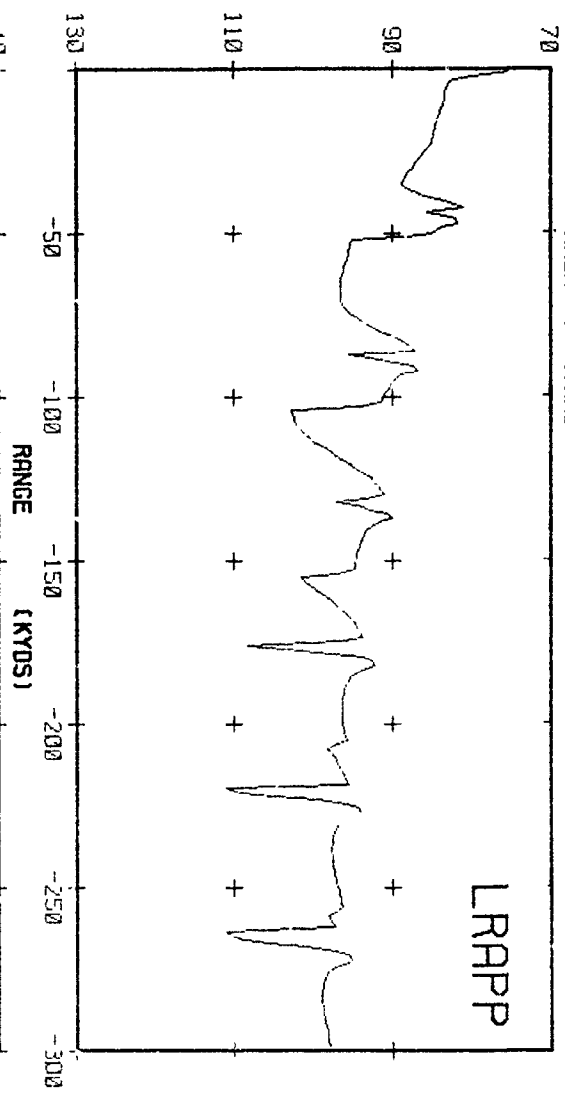




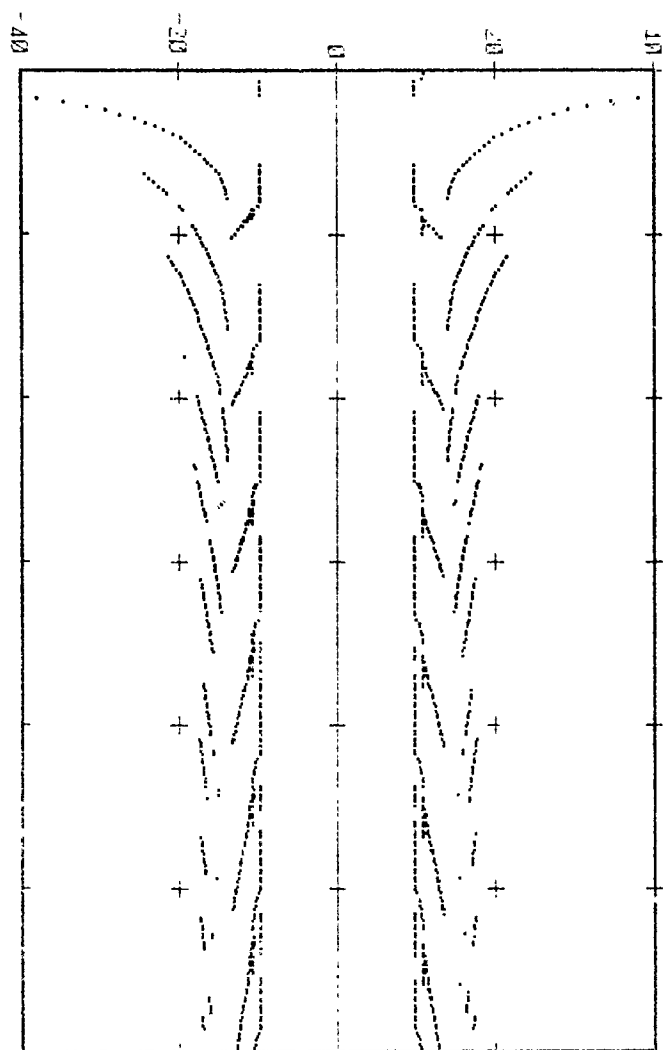


AREA 3B SUMMER S 50 R 300 F 300

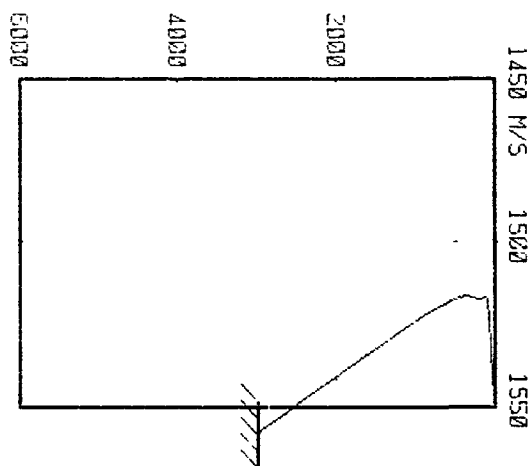
DB LOSS



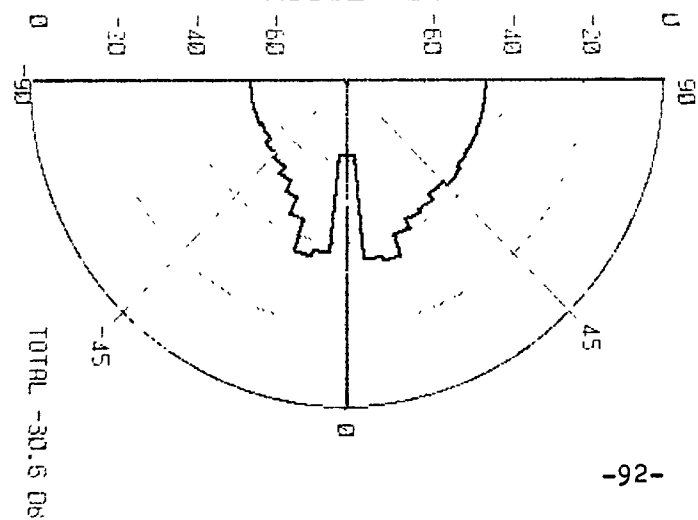
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



MSS AREA 38 SUMMER

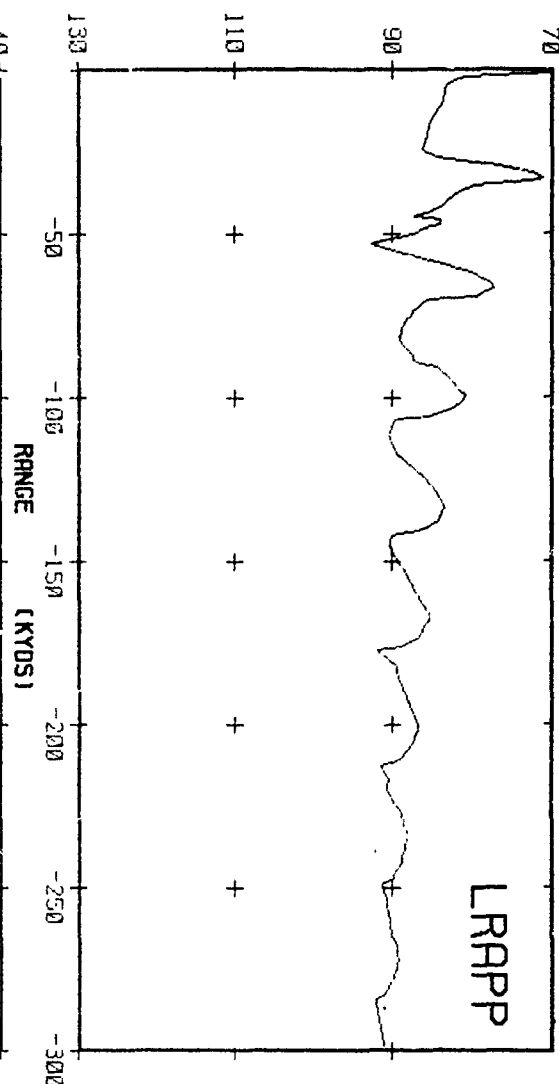
S 233 R 300 F 300

1450 M/S

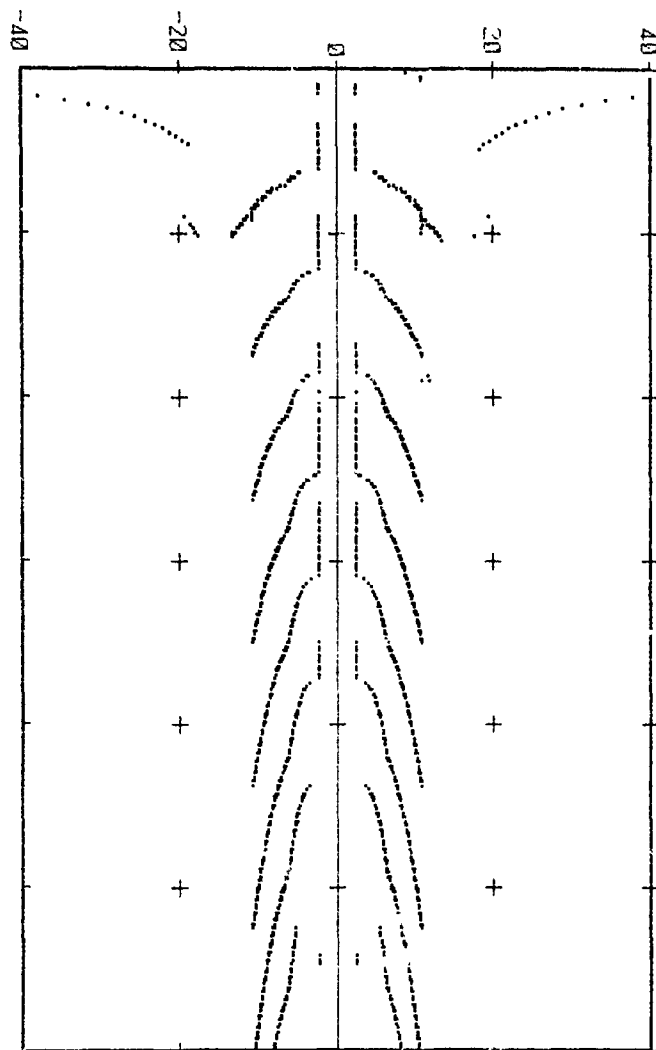
1500

1550

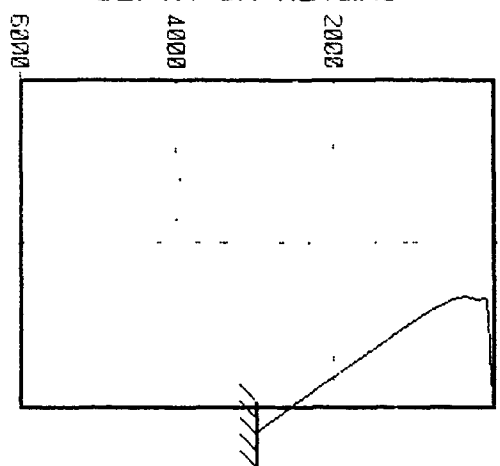
76 LOSS



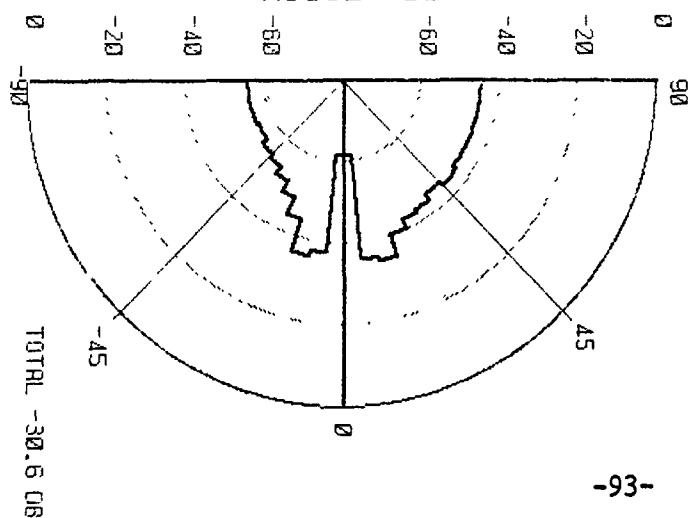
ARRIVAL ANGLE



DEPTH IN METERS



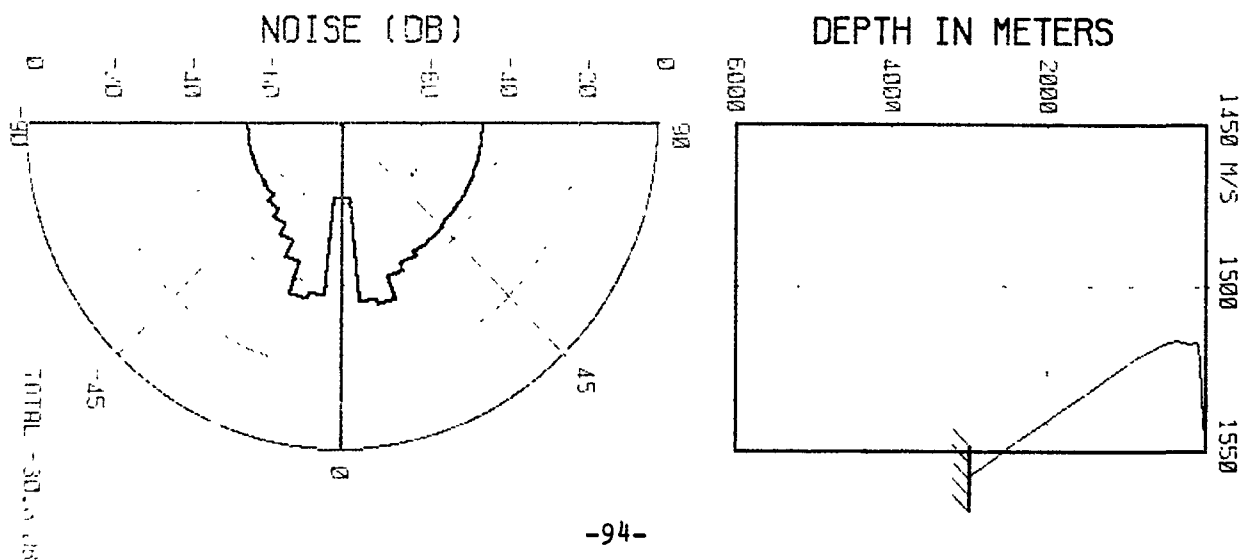
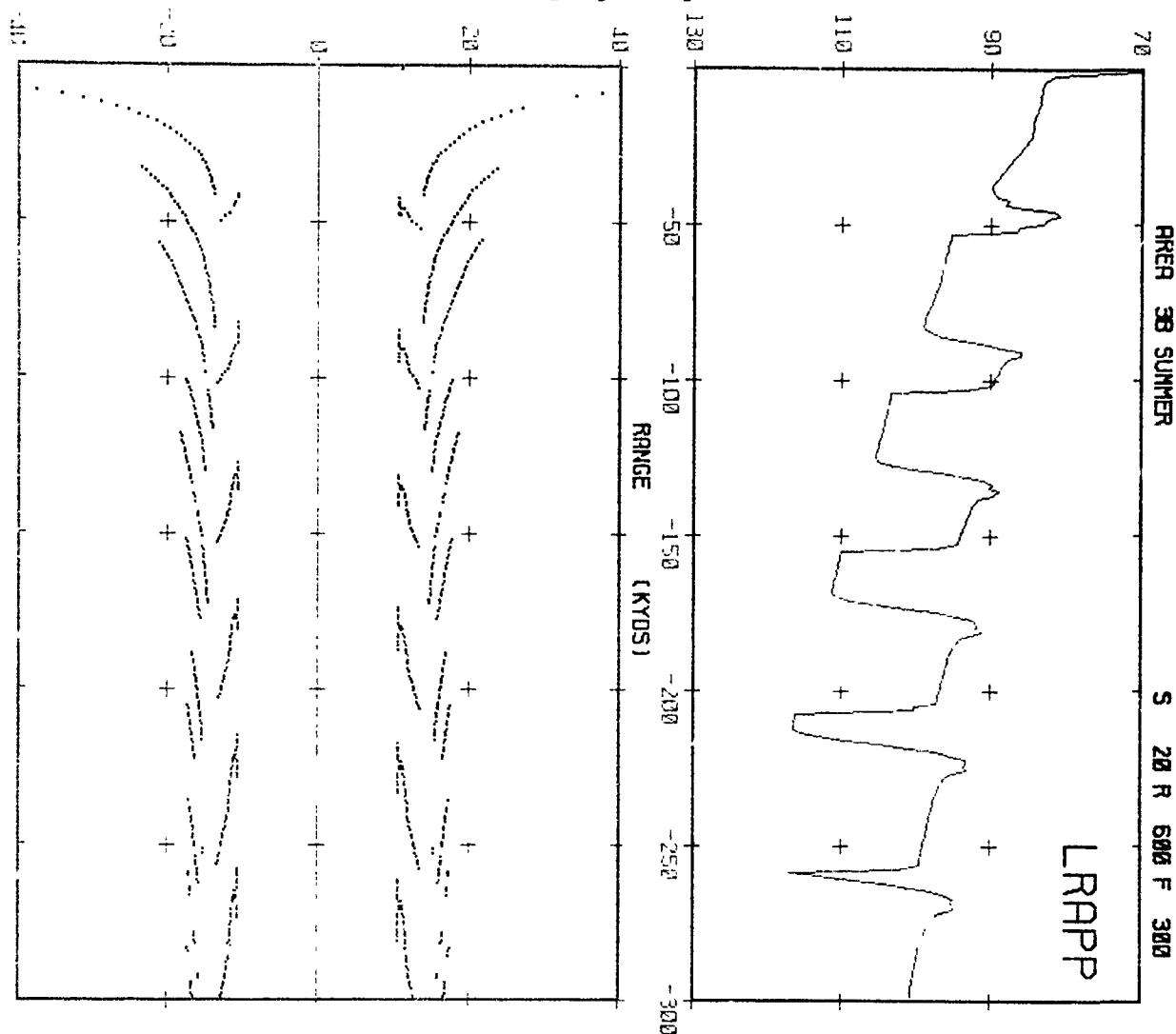
NOISE (DB)



ARRIVAL ANGLE

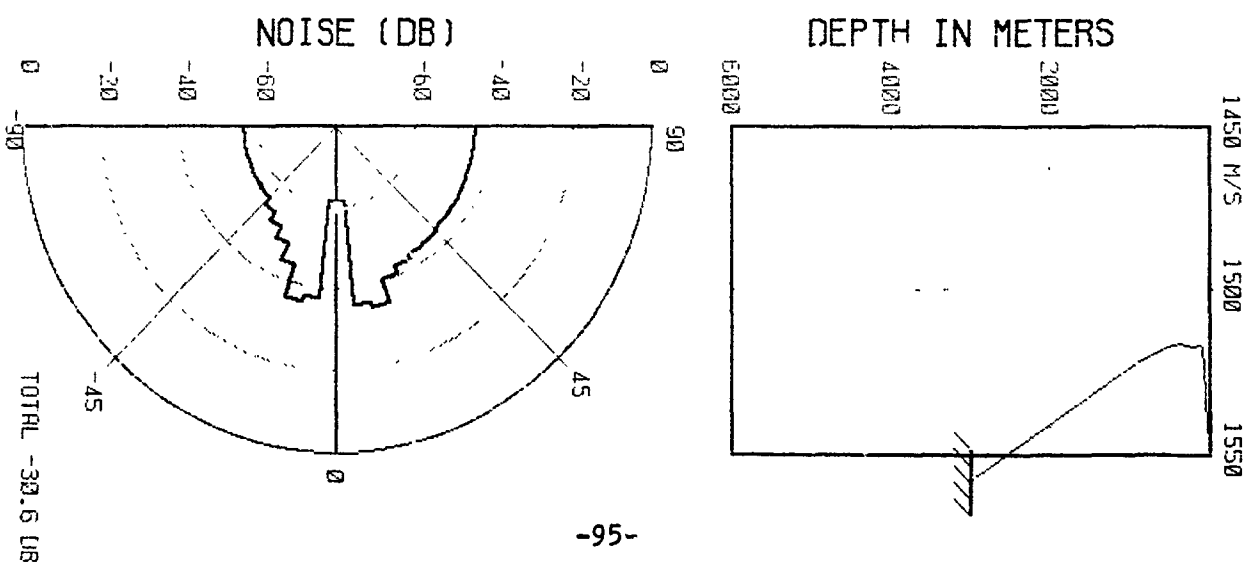
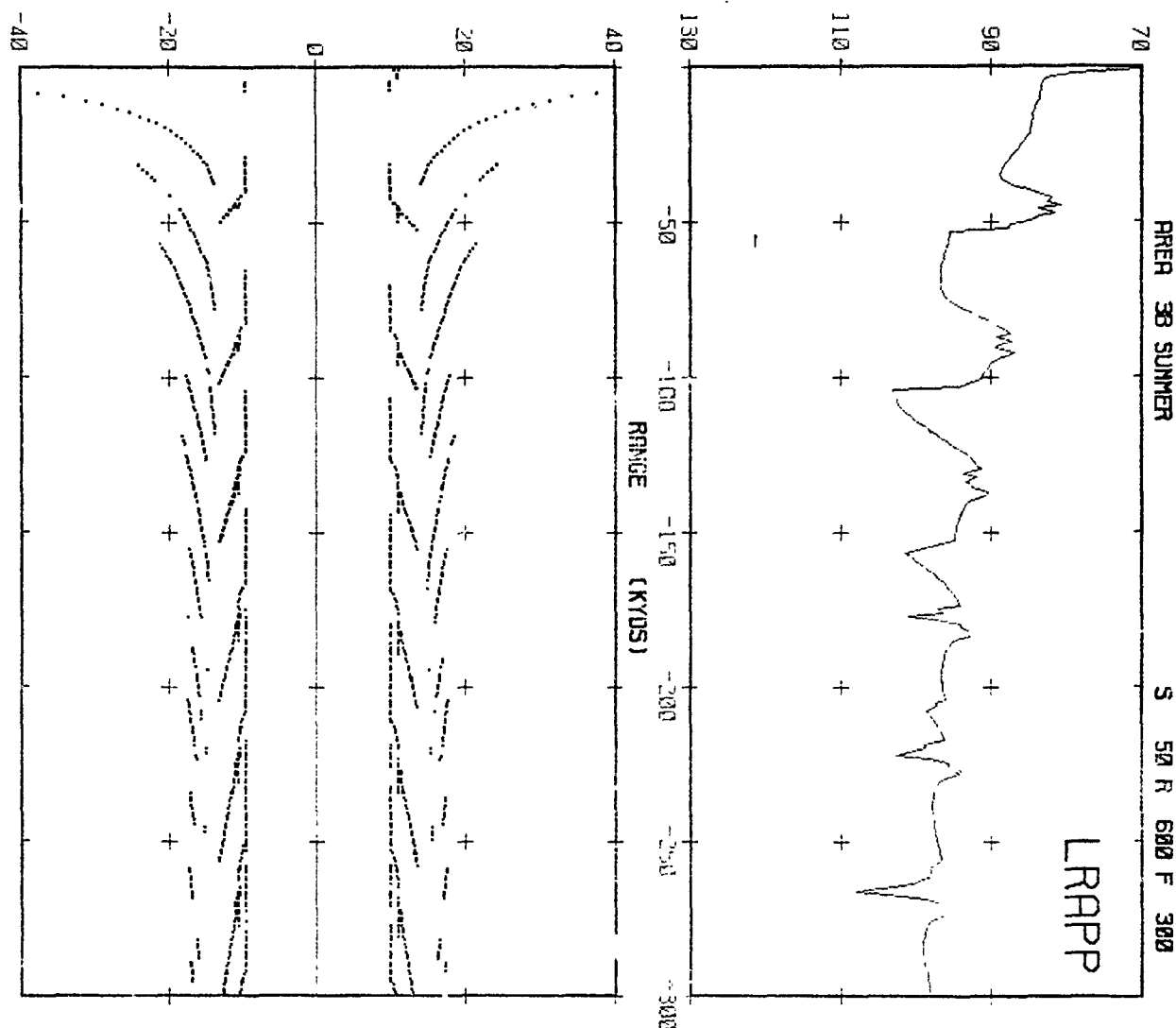
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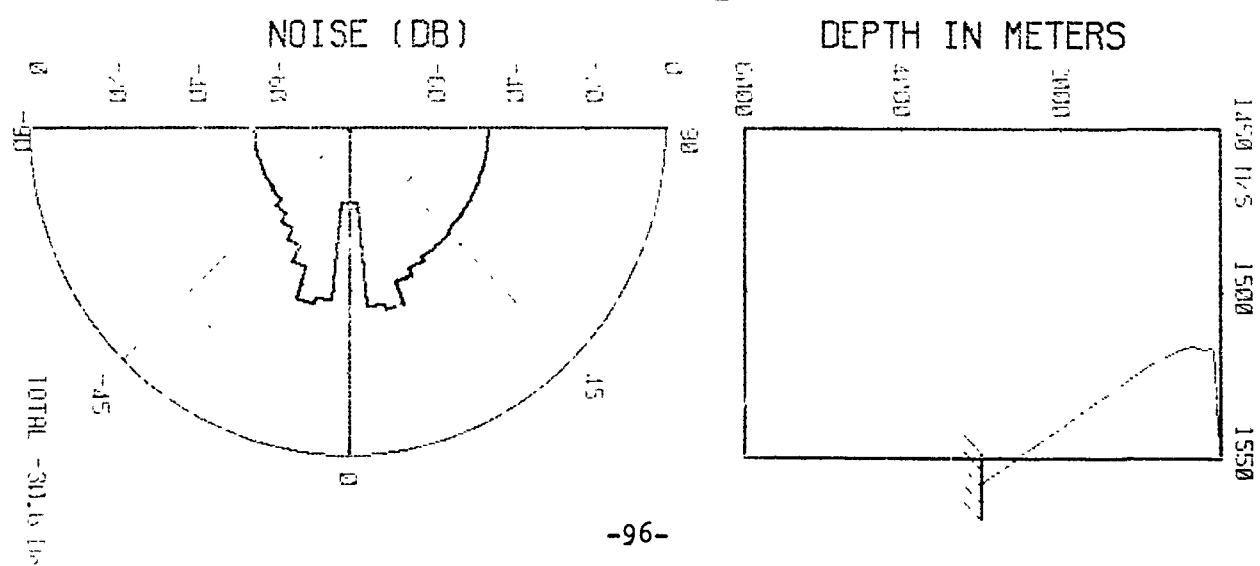
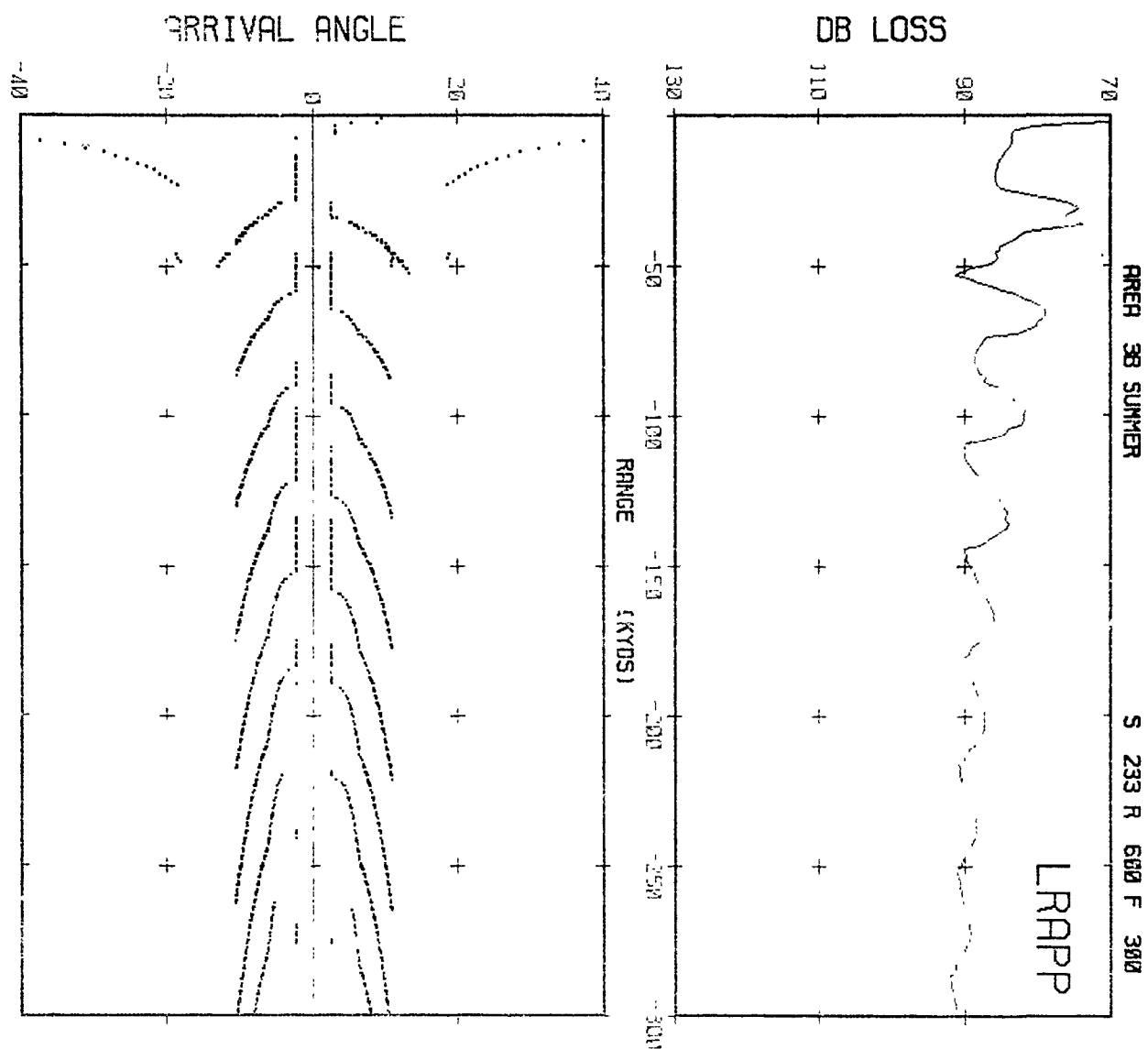
DB LOSS



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DB LOSS



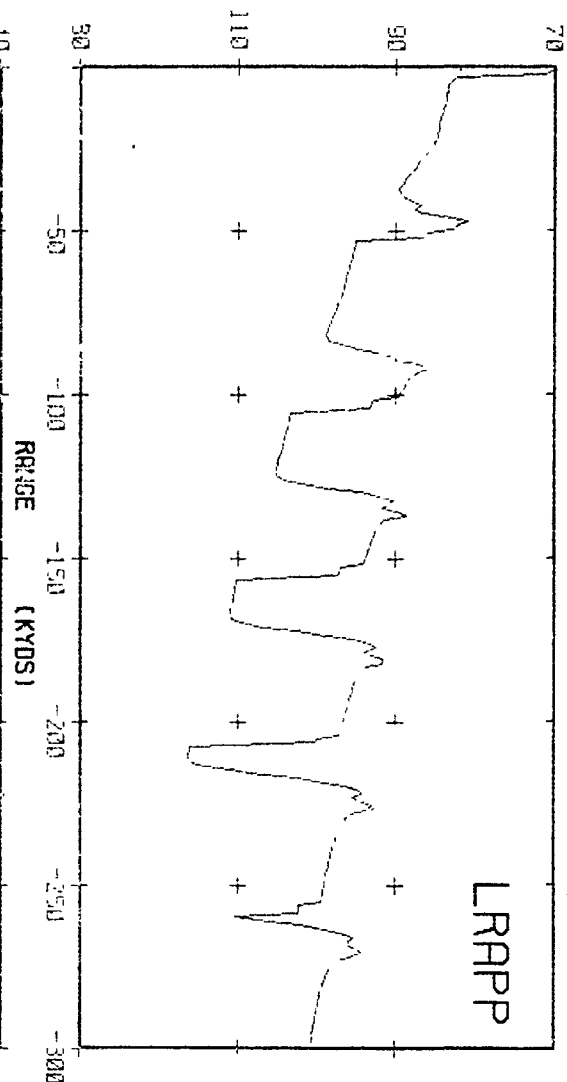


AREA 3B SUMMER

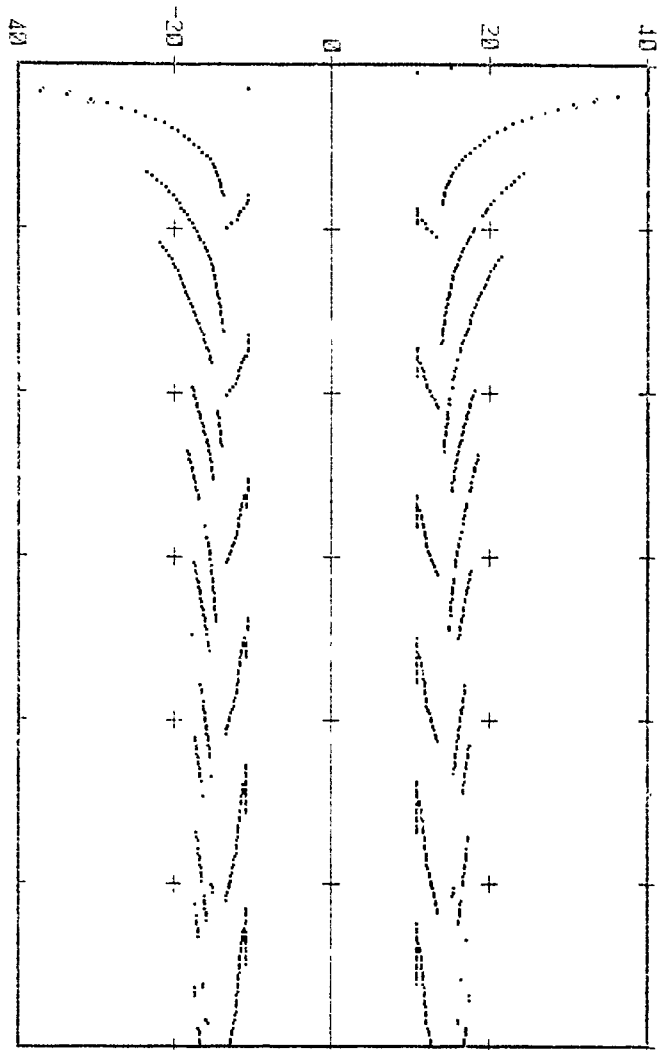
S 20 R 1000 F 300

1450 M/S 1500 1550

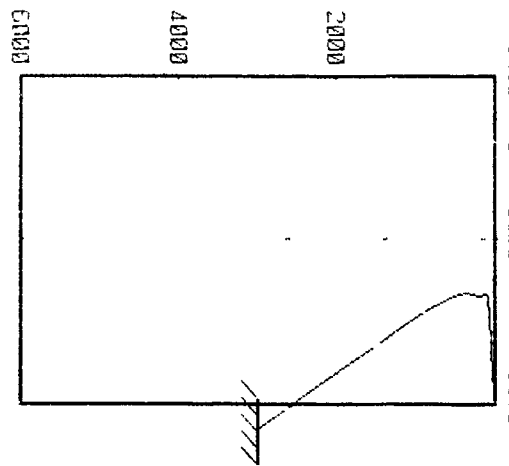
DB LOSS



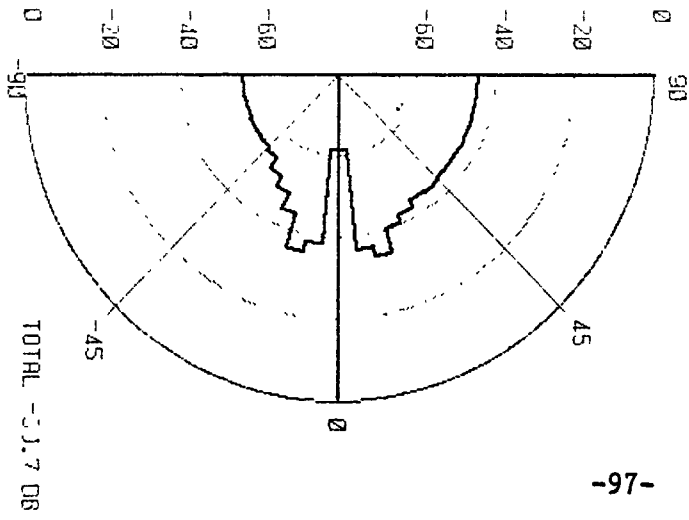
ARRIVAL ANGLE

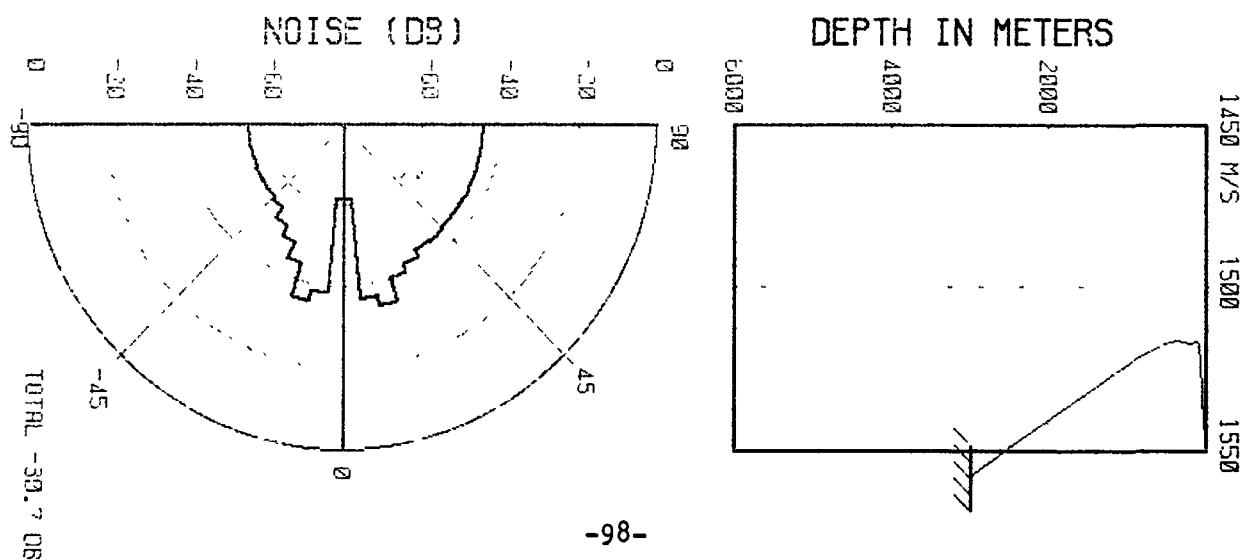
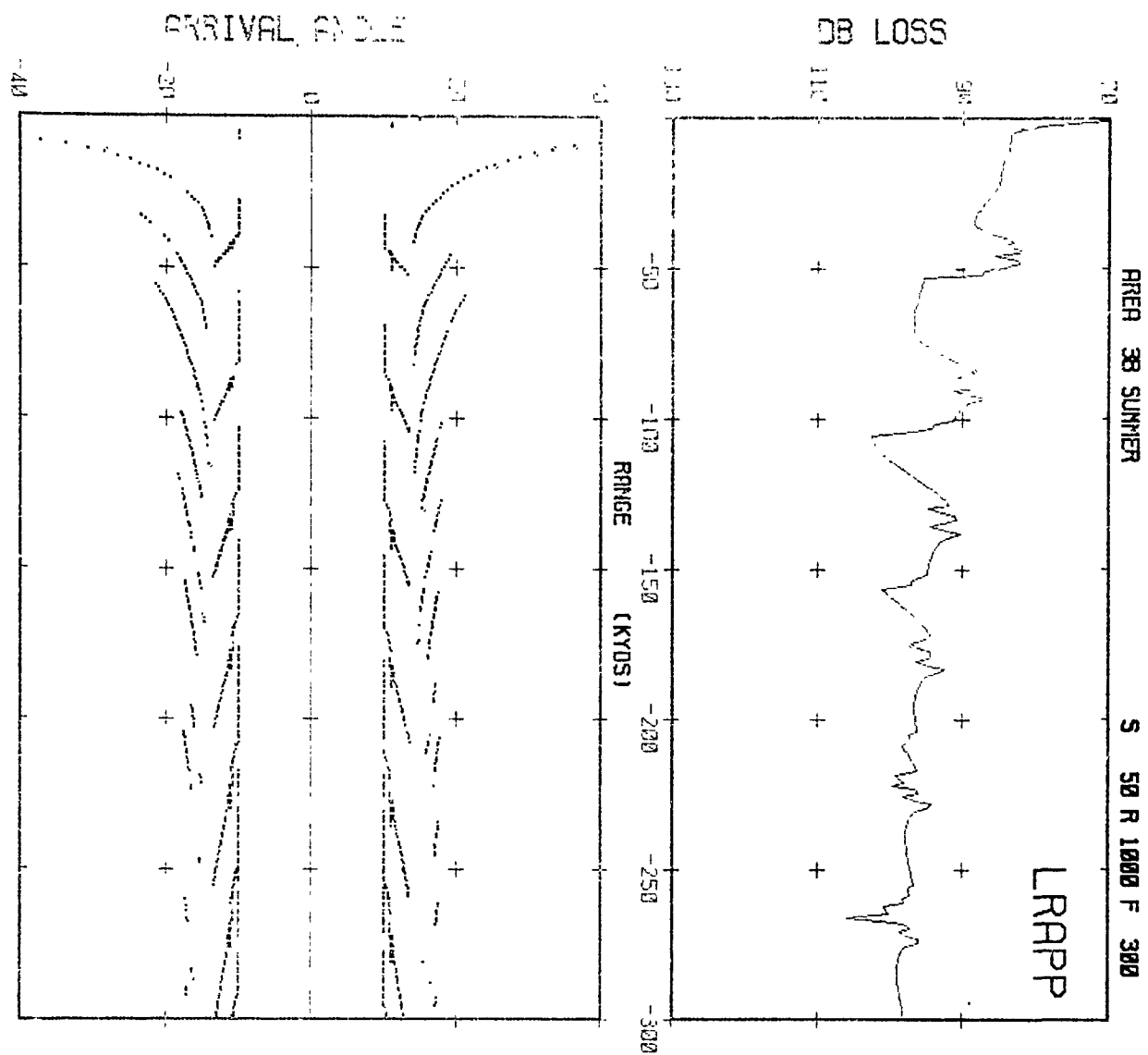


DEPTH IN METERS



NOISE (DB)



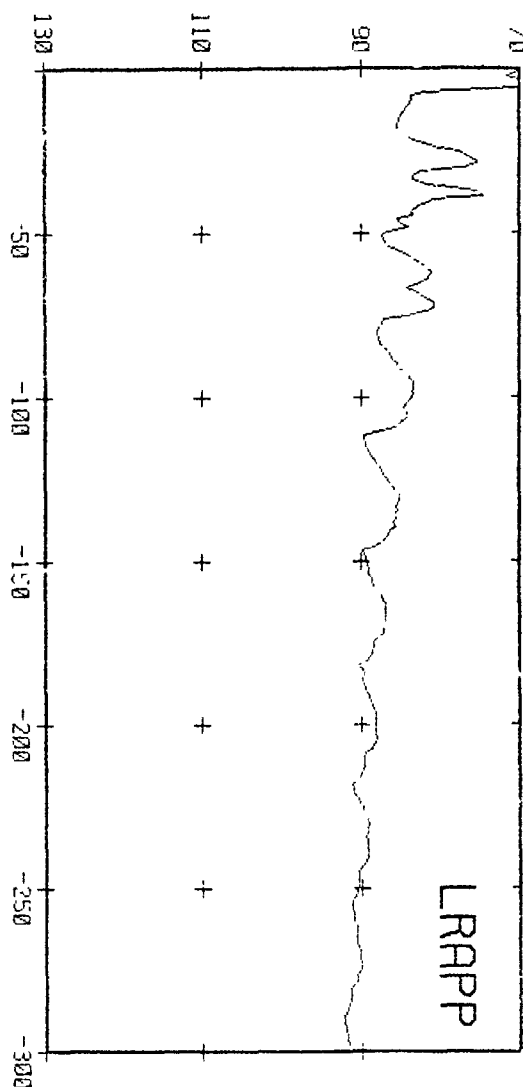


AREA 38 SUMMER

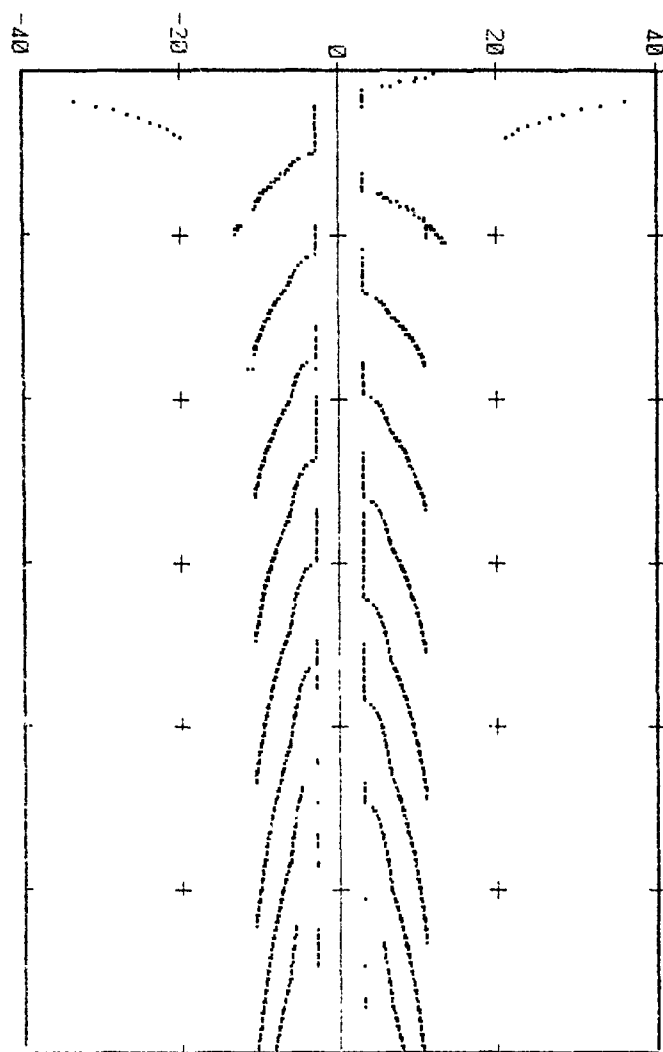
S 253 R 1000 F 300

LRAPP

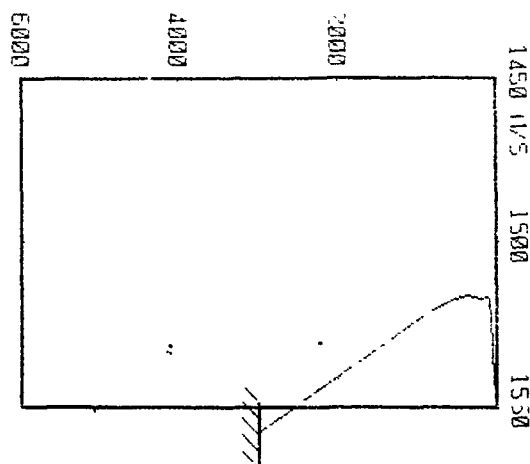
DB LOSS



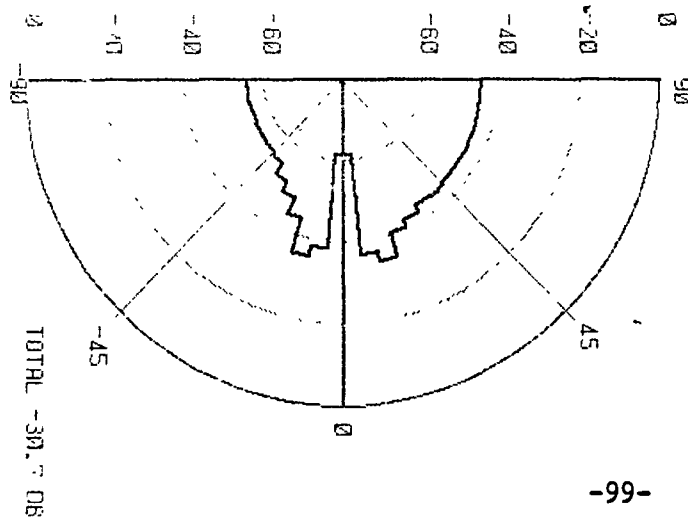
ARRIVAL ANGLE



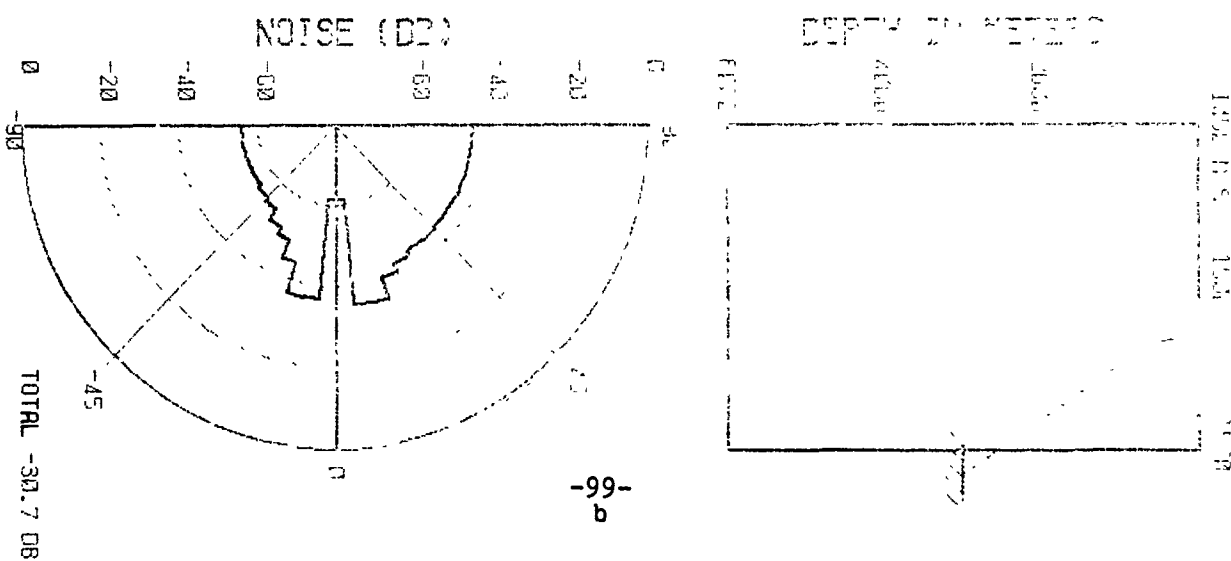
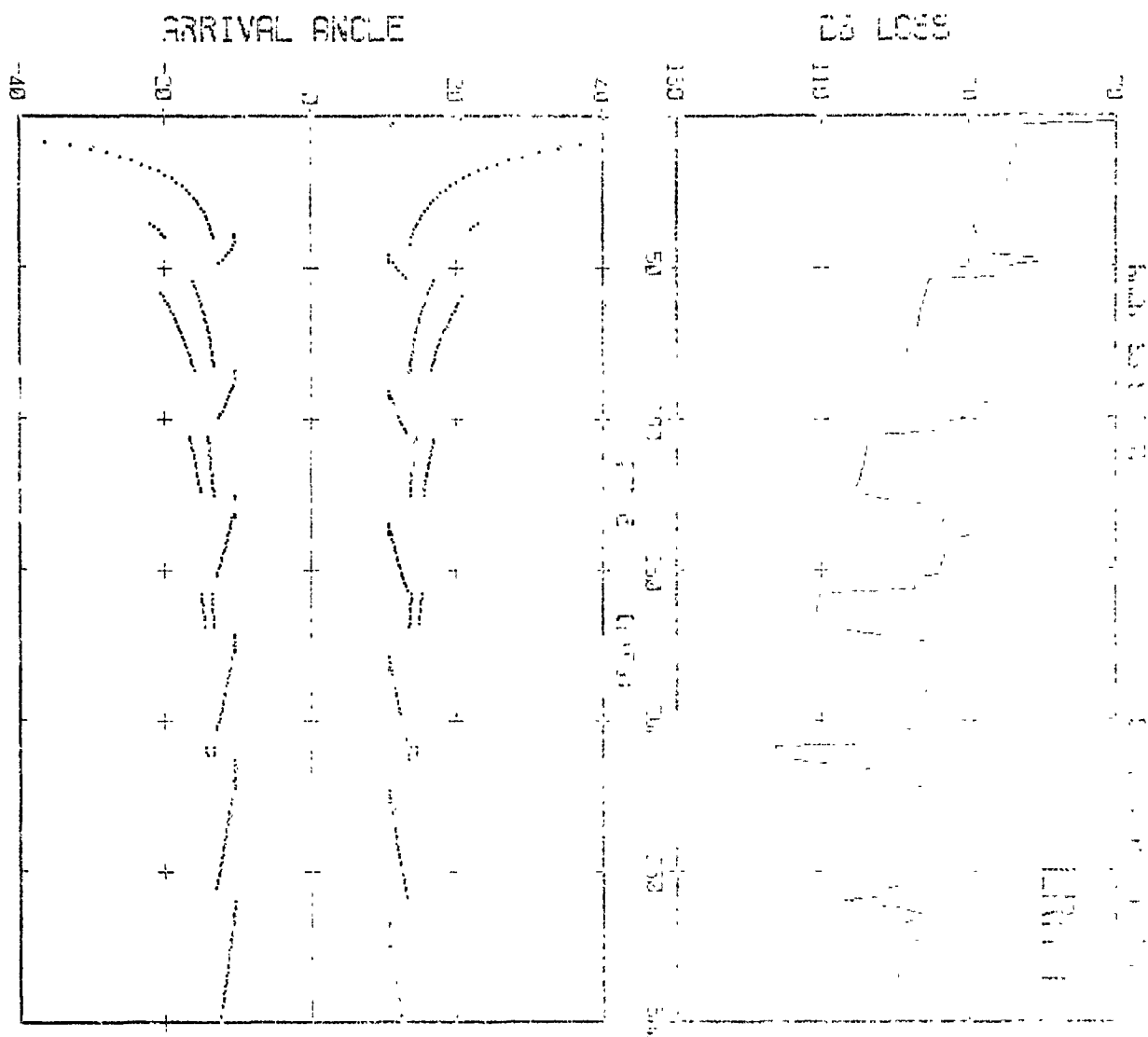
DEPTH IN METERS

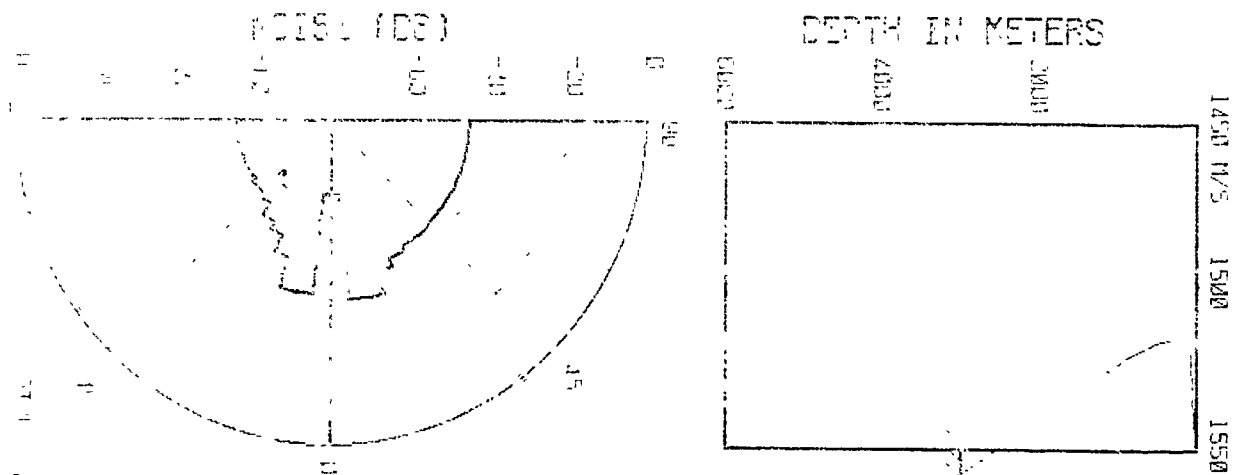
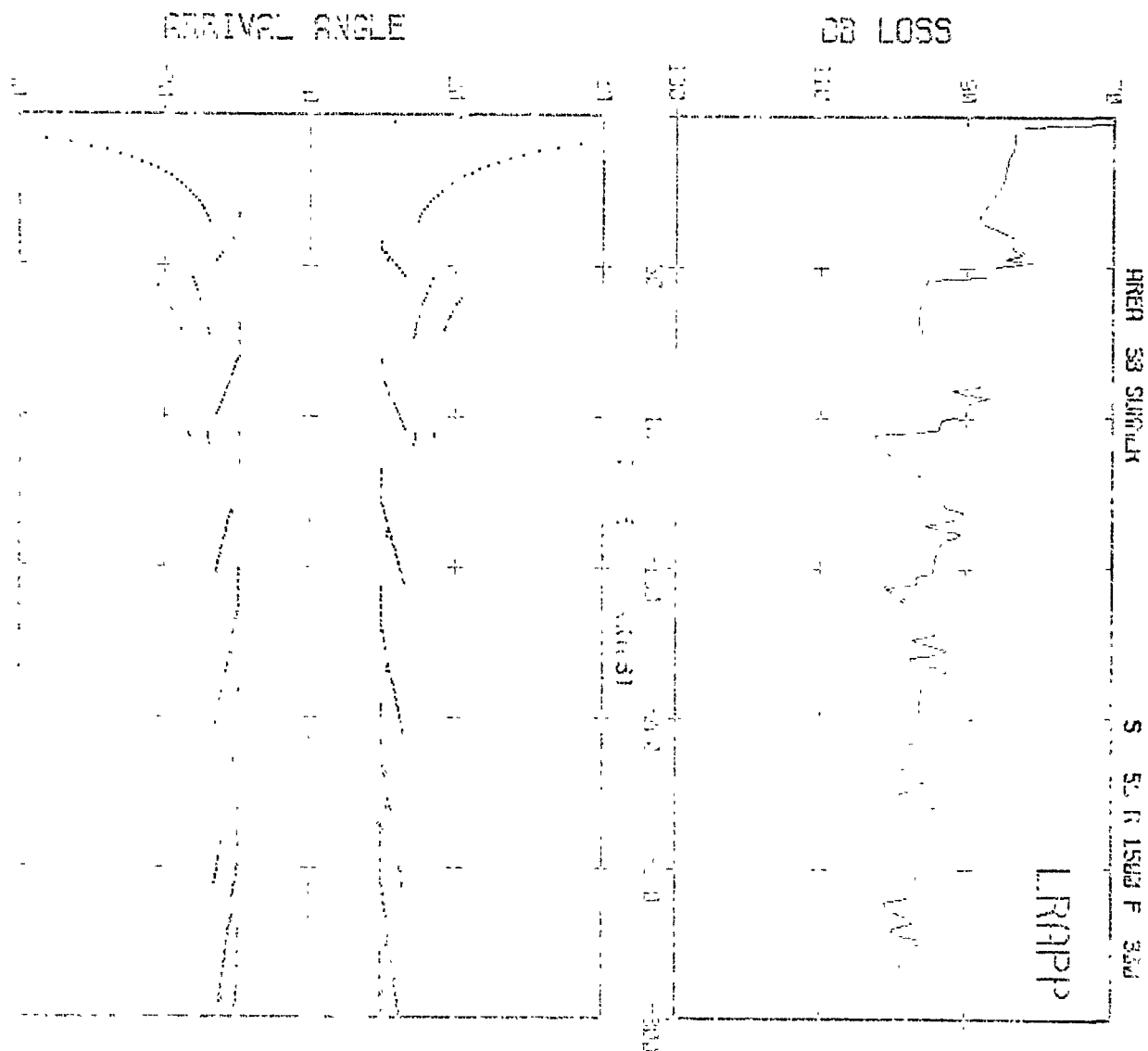


NOISE (DB)



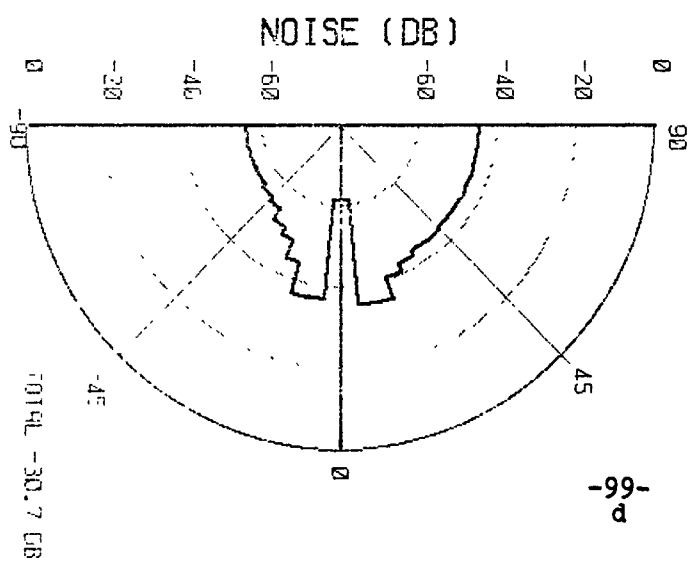
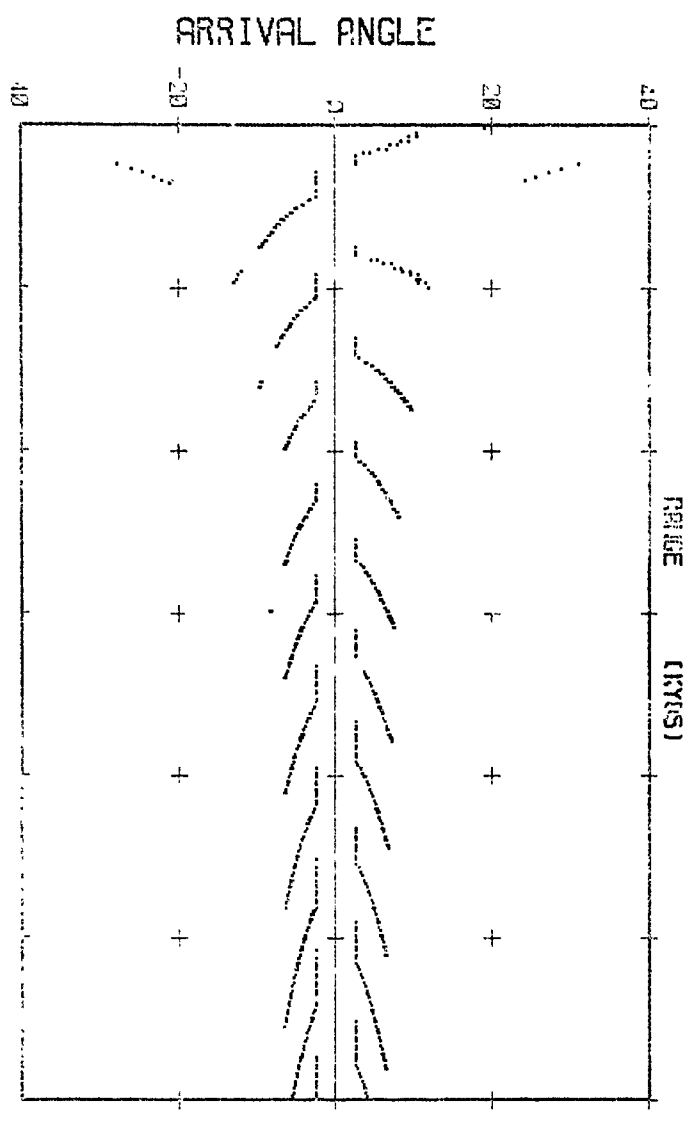
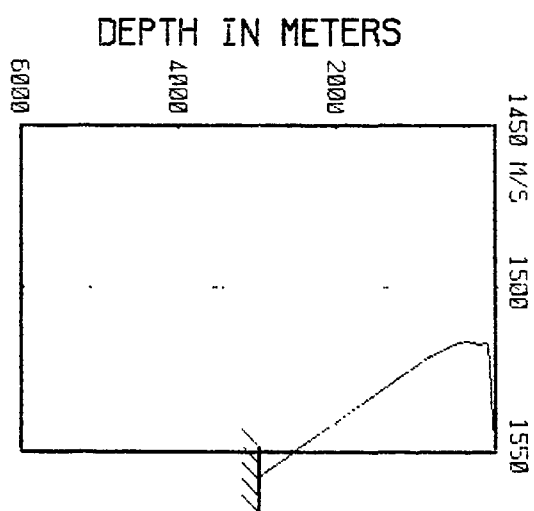
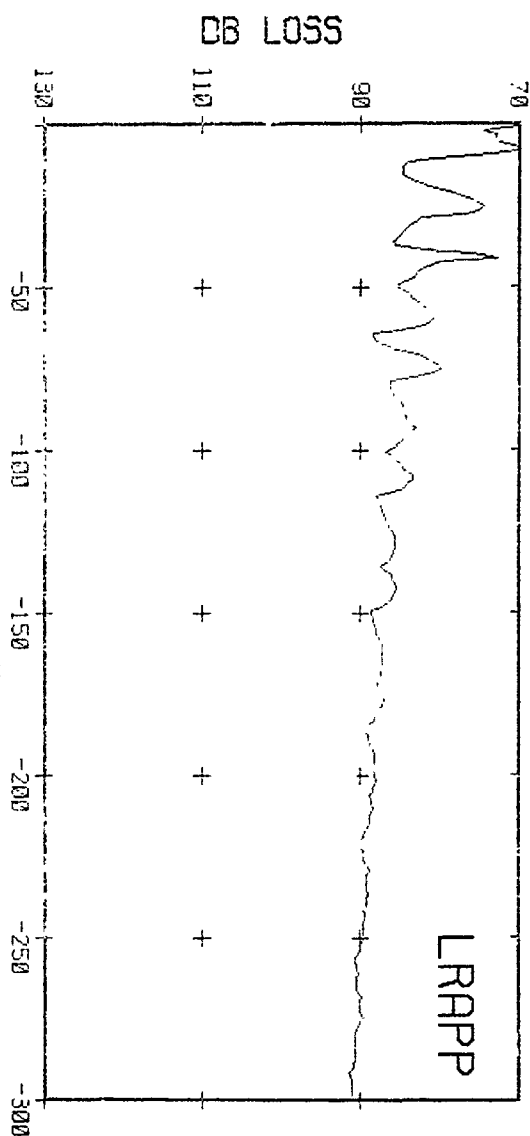






S 233 R 1504 F 300

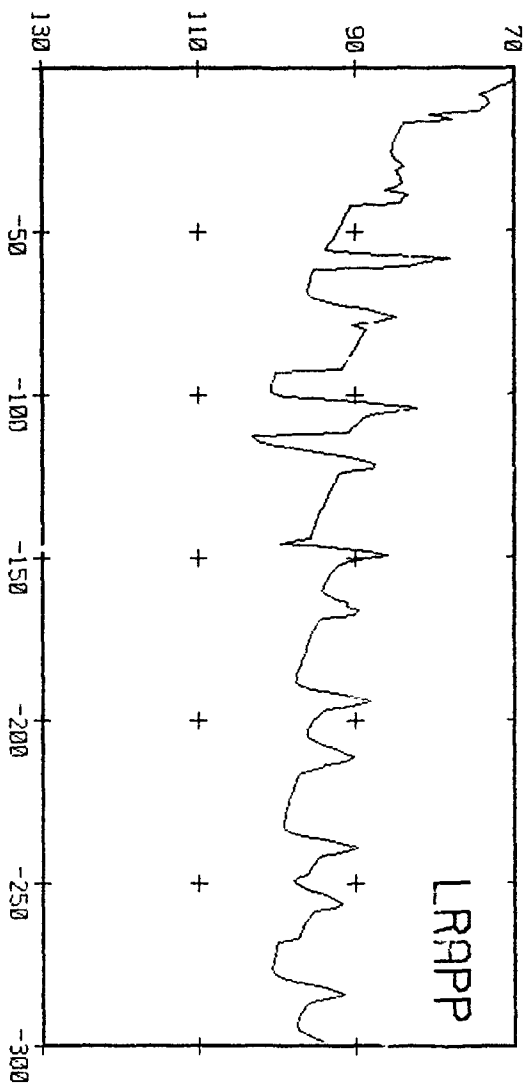
1450	14/5	1500	1550
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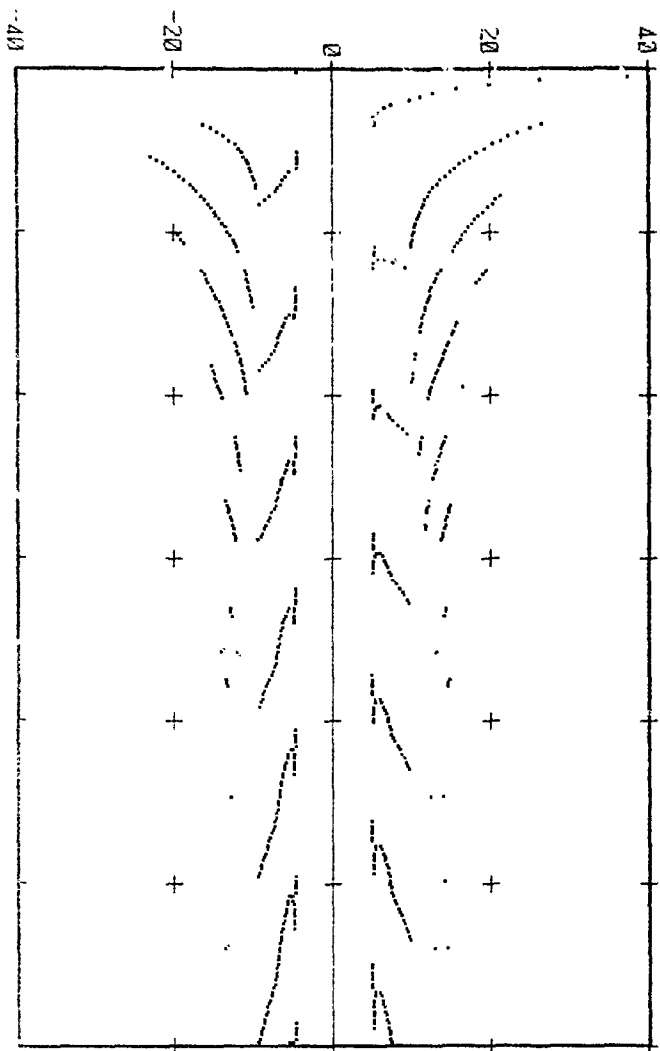
ARRER 38 SUMMER

S 20 R 6000 F 300

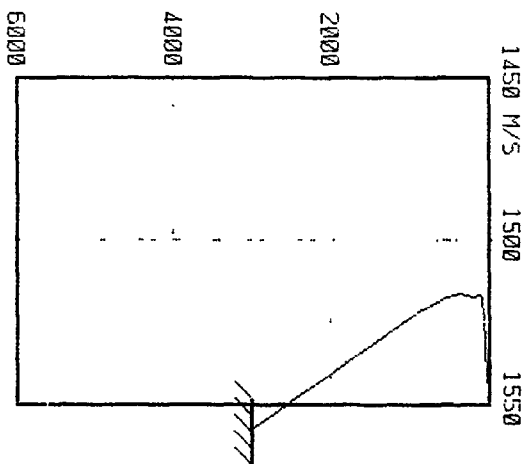
DB LOSS



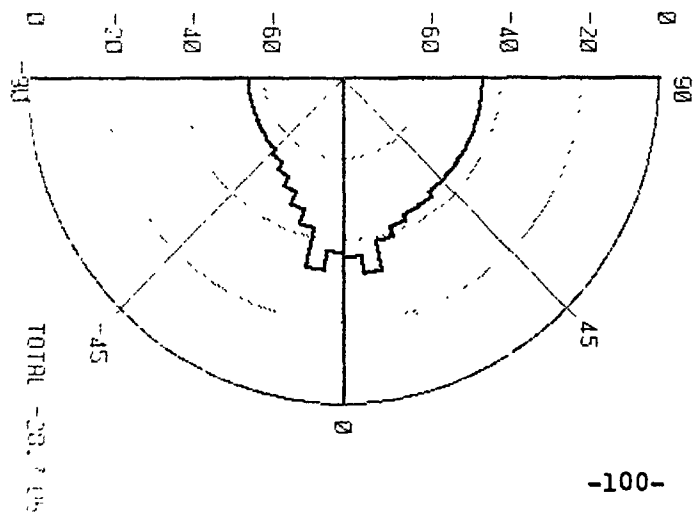
ARRIVAL ANGLE



DEPTH IN METERS



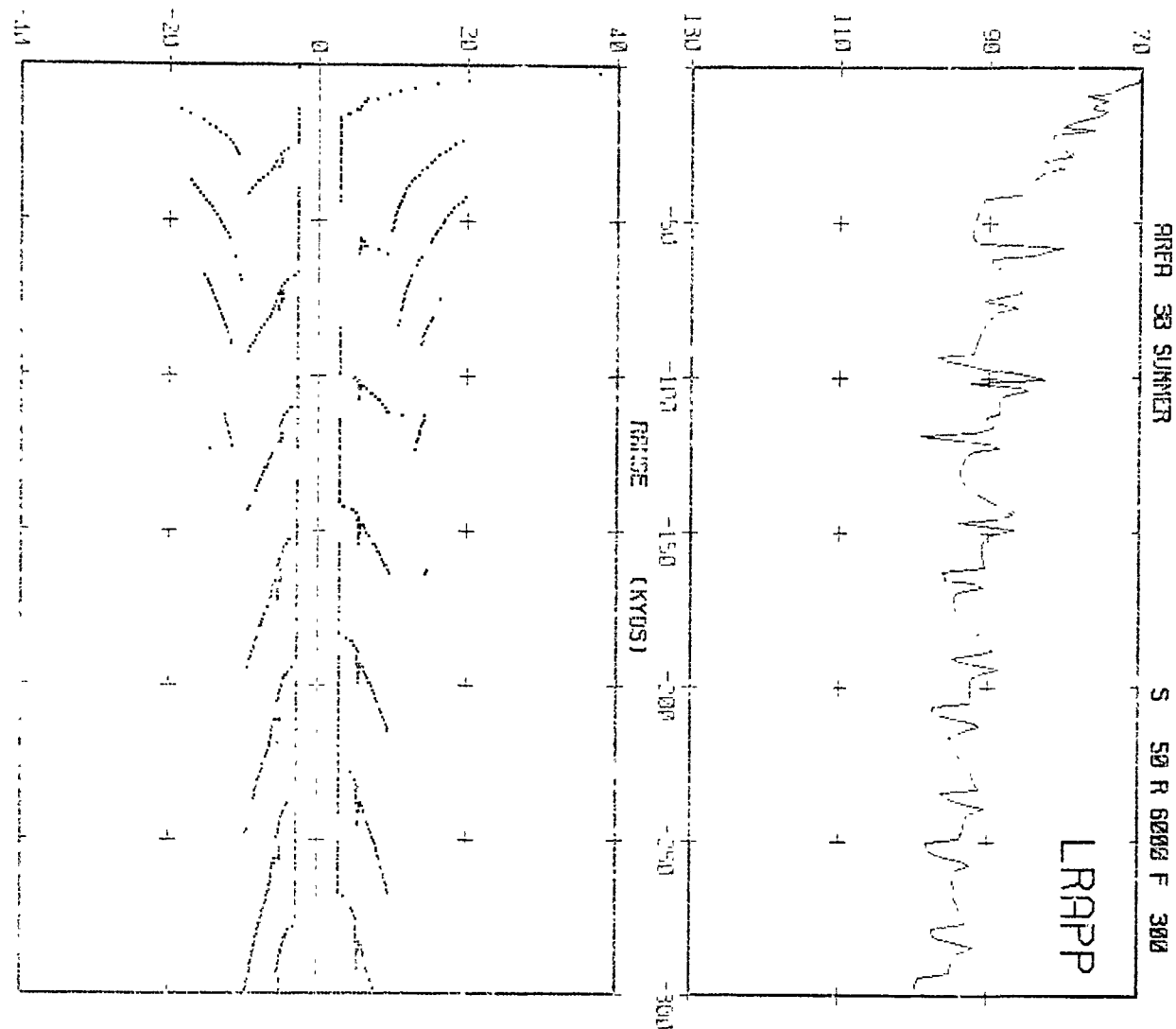
NOISE (DB)



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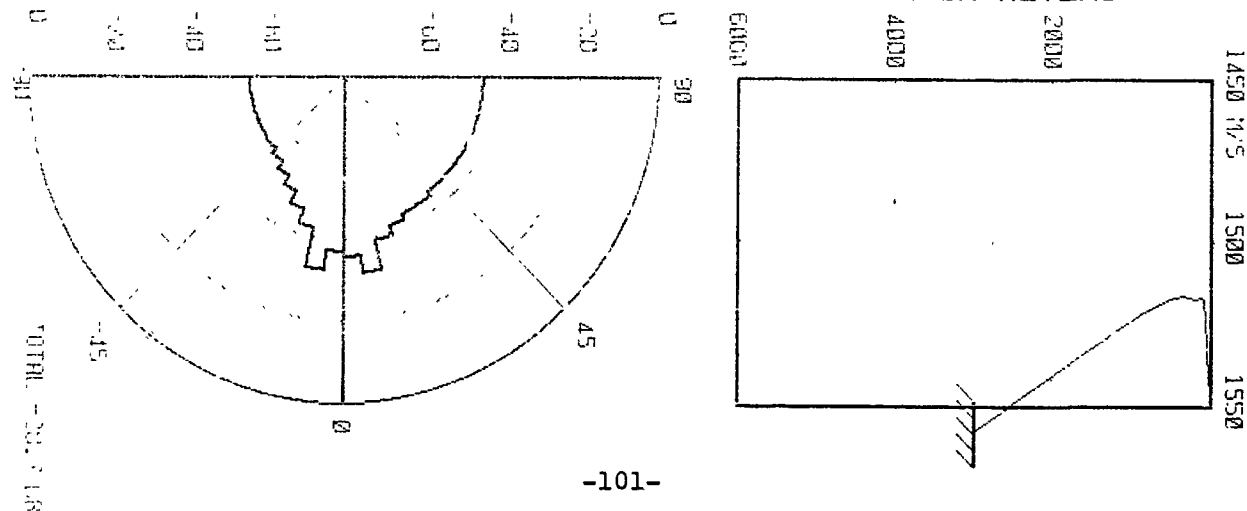
ARRIVAL ANGLE

DB LOSS



NOISE (DB)

DEPTH IN METERS



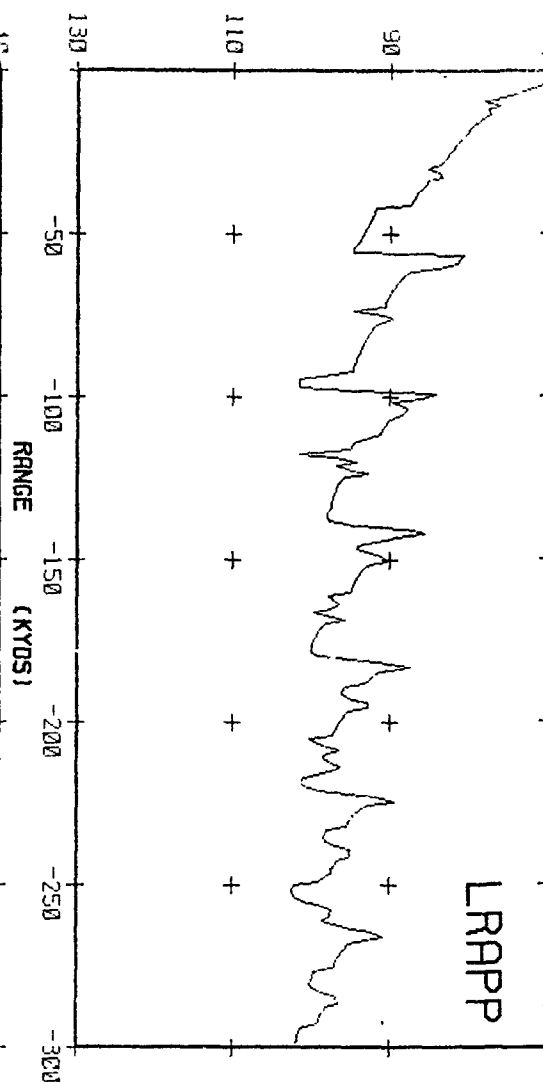
AREA 33 SUMMER

S 233 R 6000 F 300

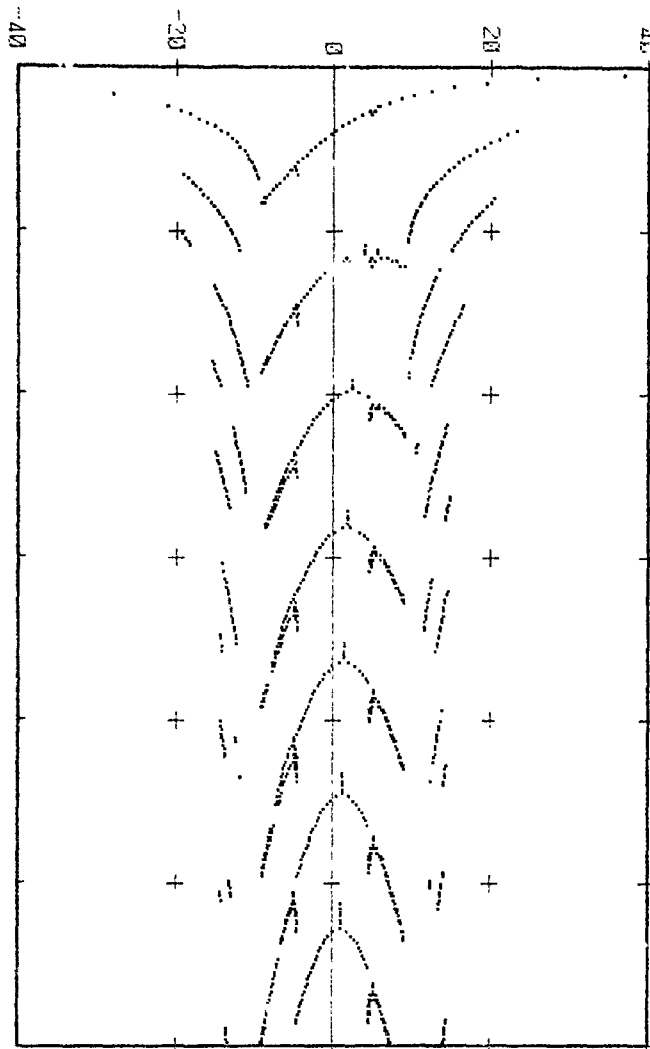
1450 M/S 1.000

1550

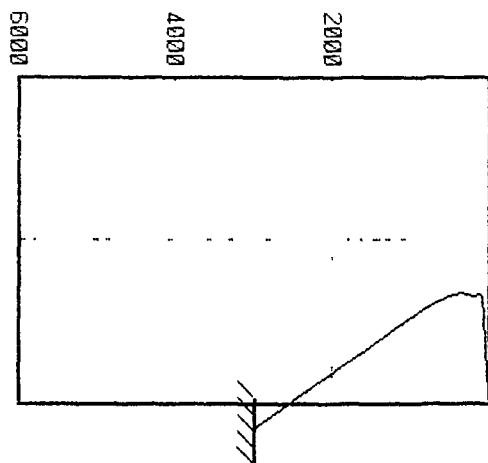
DB LOSS



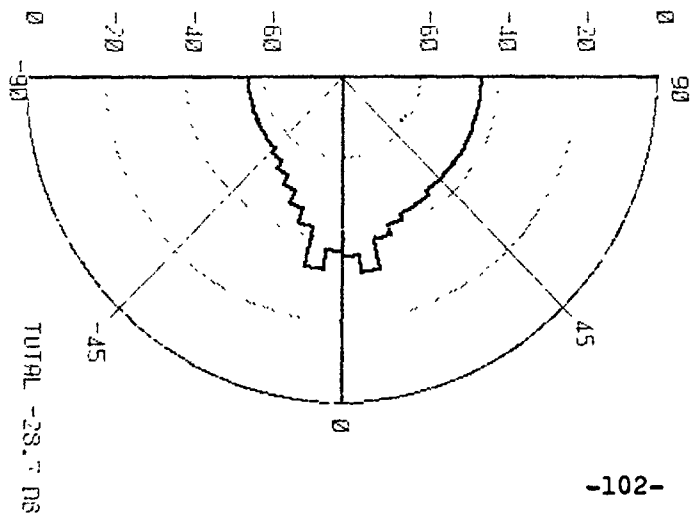
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

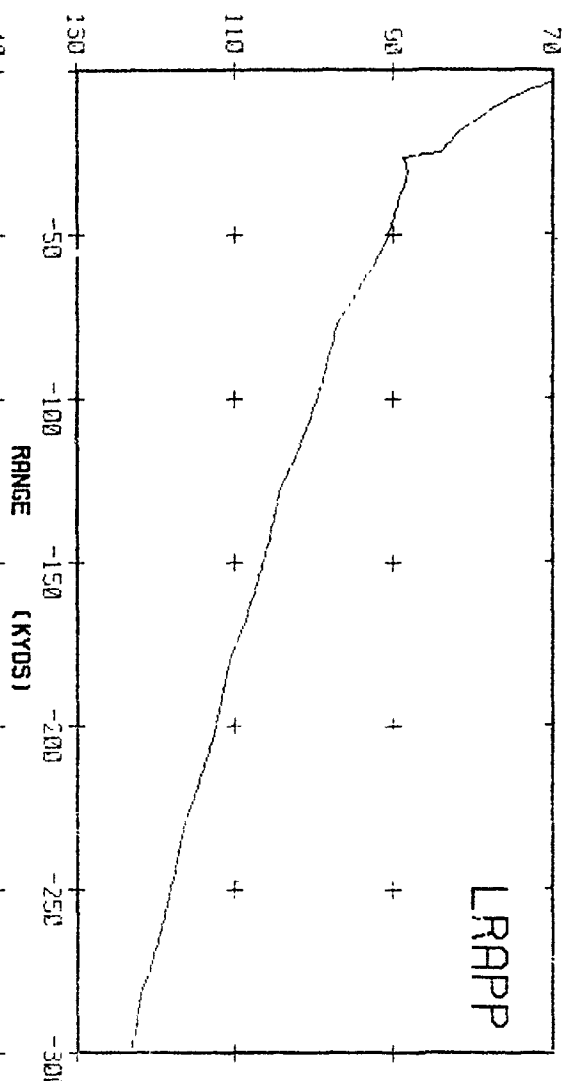


AREA 30 SUMMER

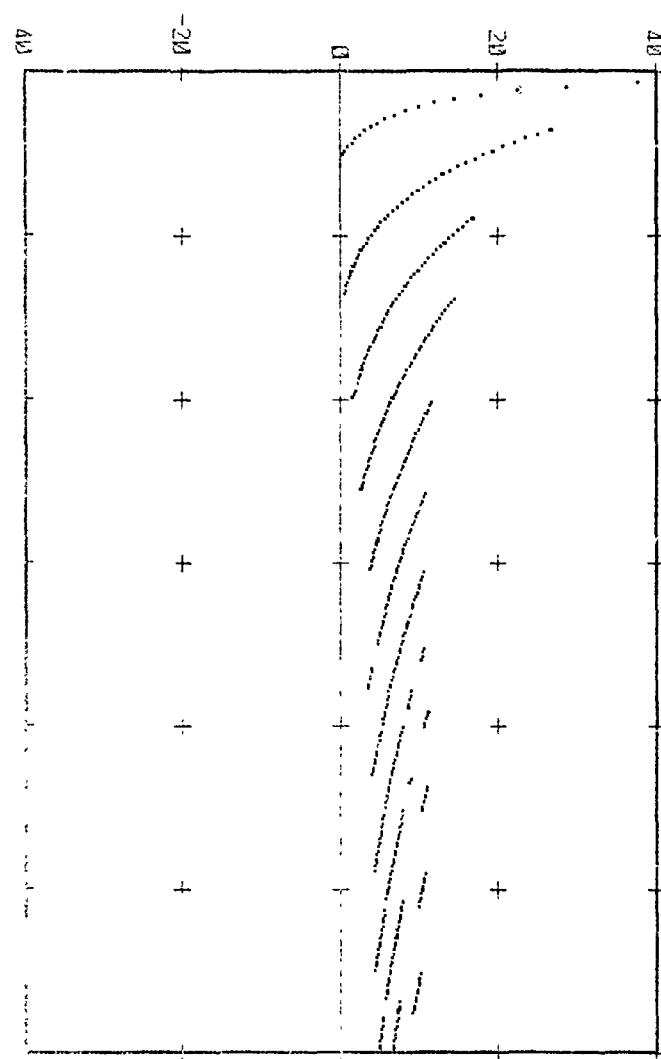
S 20 R 9842 F 300

1450 11/5 1500 1550

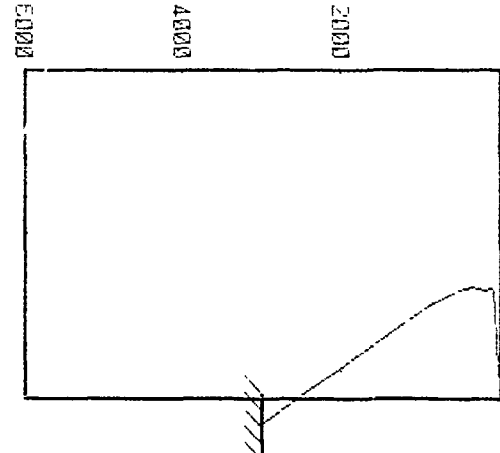
DB LOSS



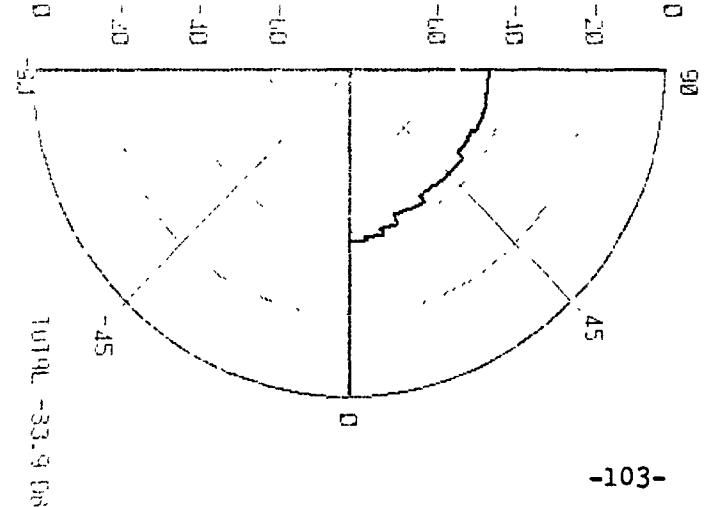
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



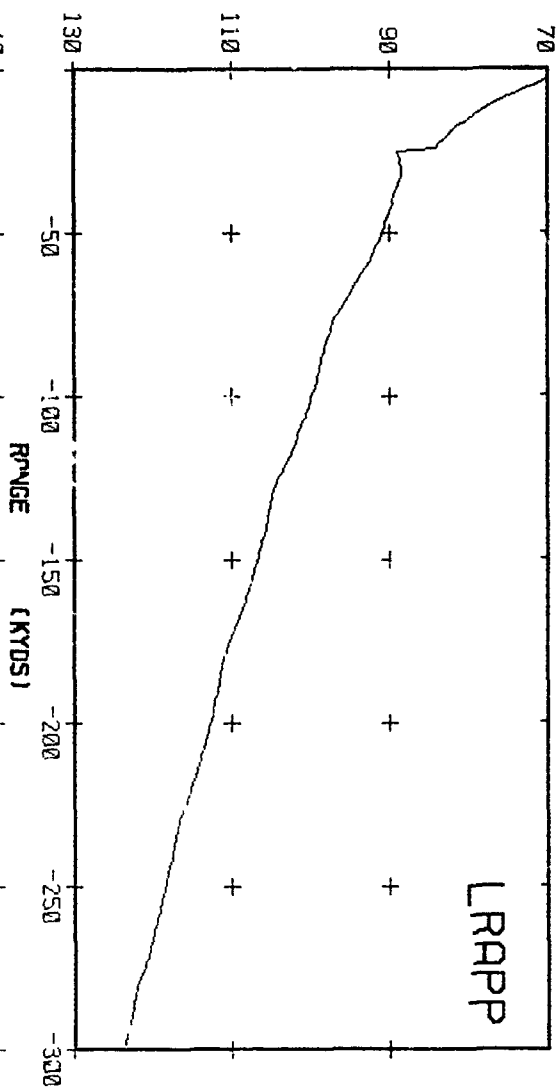
AREA 38 SUMMER

S 50 R 9842 F 300

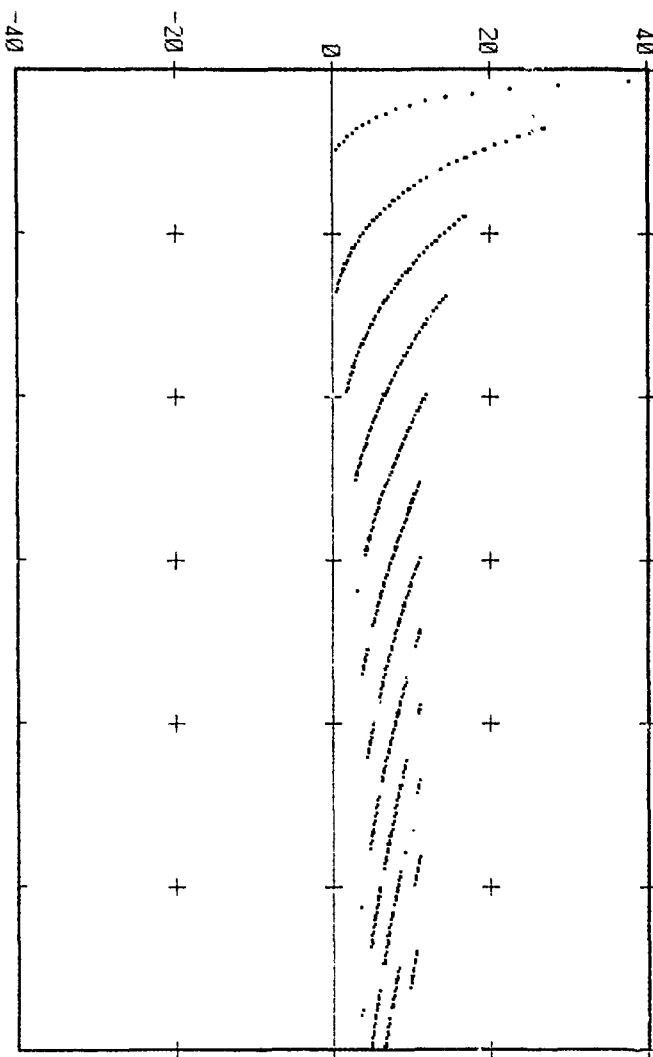
1450 M/S 1500

1550

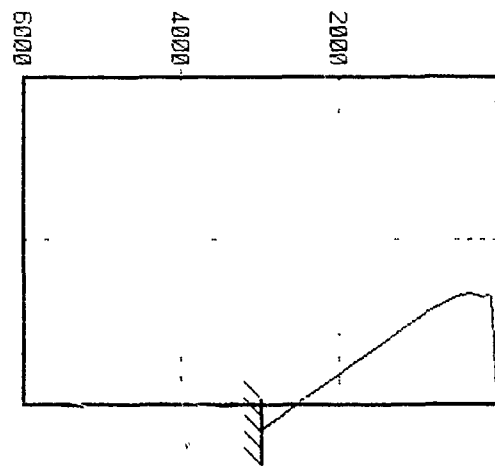
DB LOSS



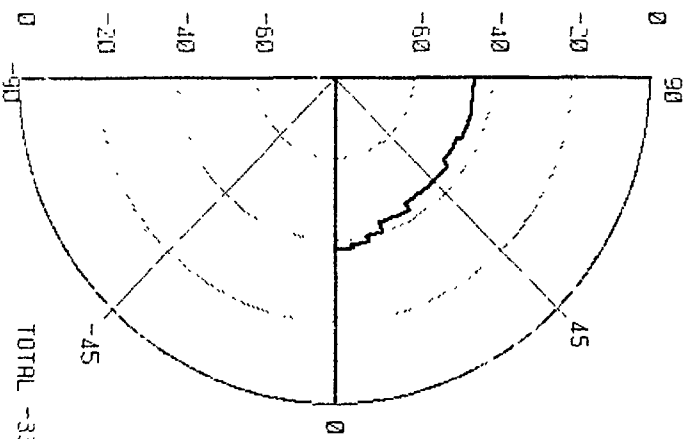
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



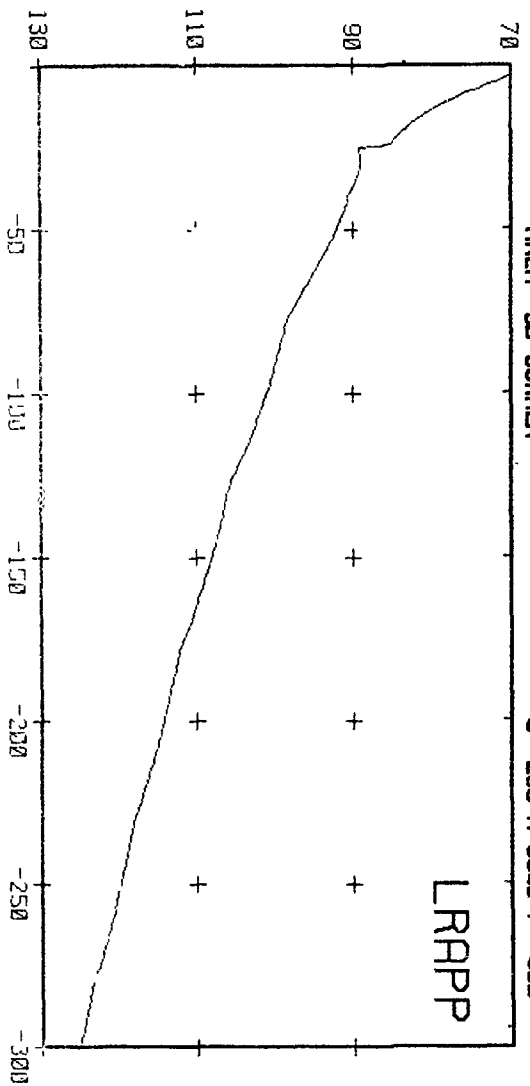


ARRER 38 SUMMER

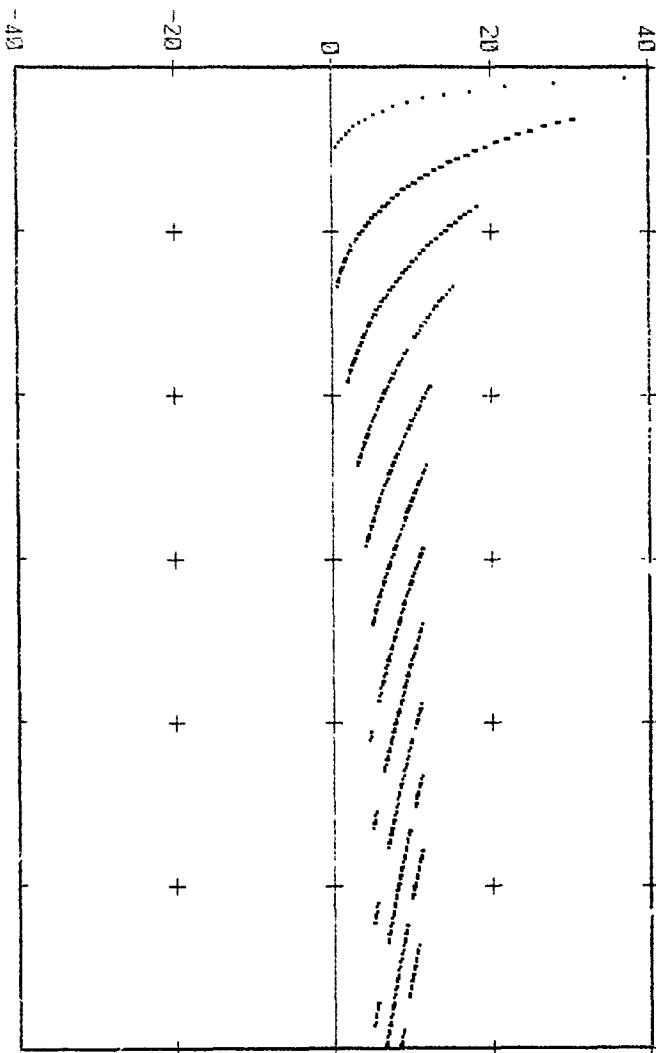
S 233 R 9842 F 300

LRAPP

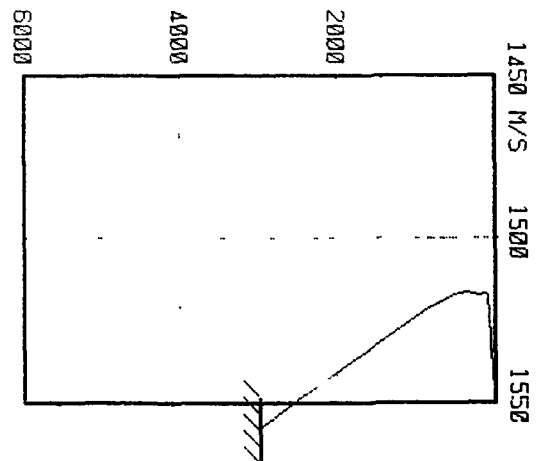
DB LOSS



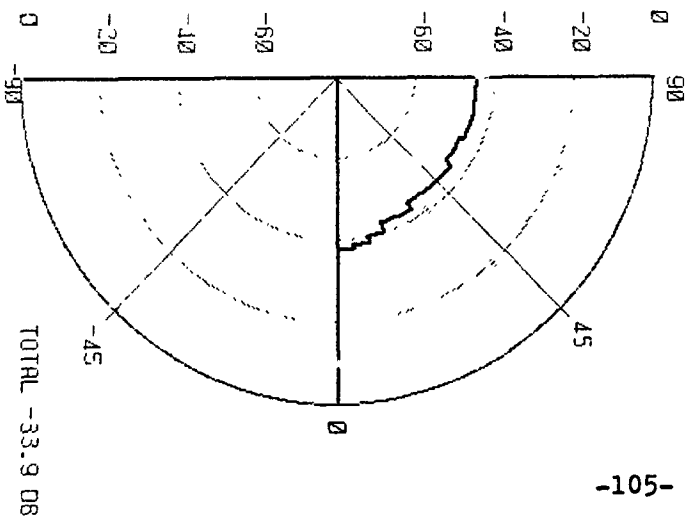
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

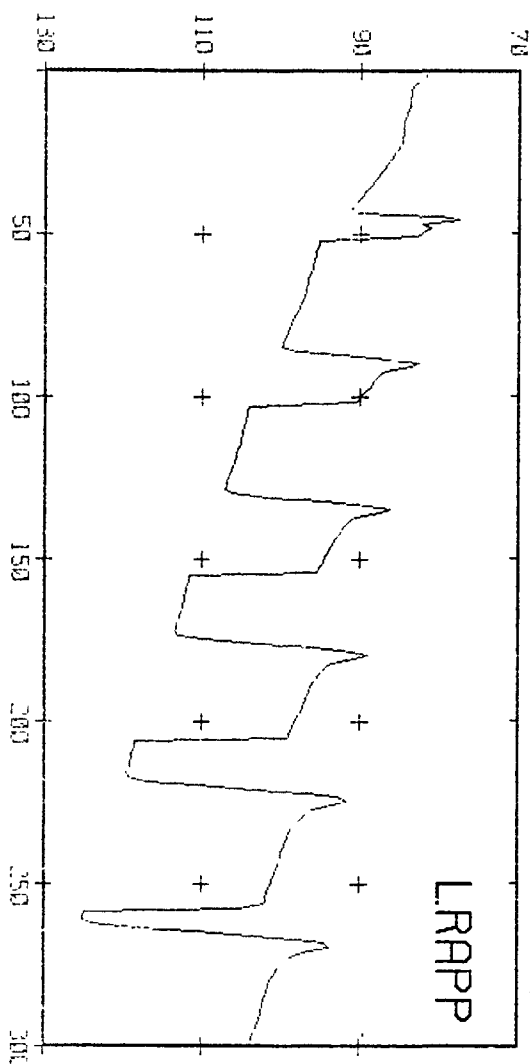


ARRER 38 SUMMER

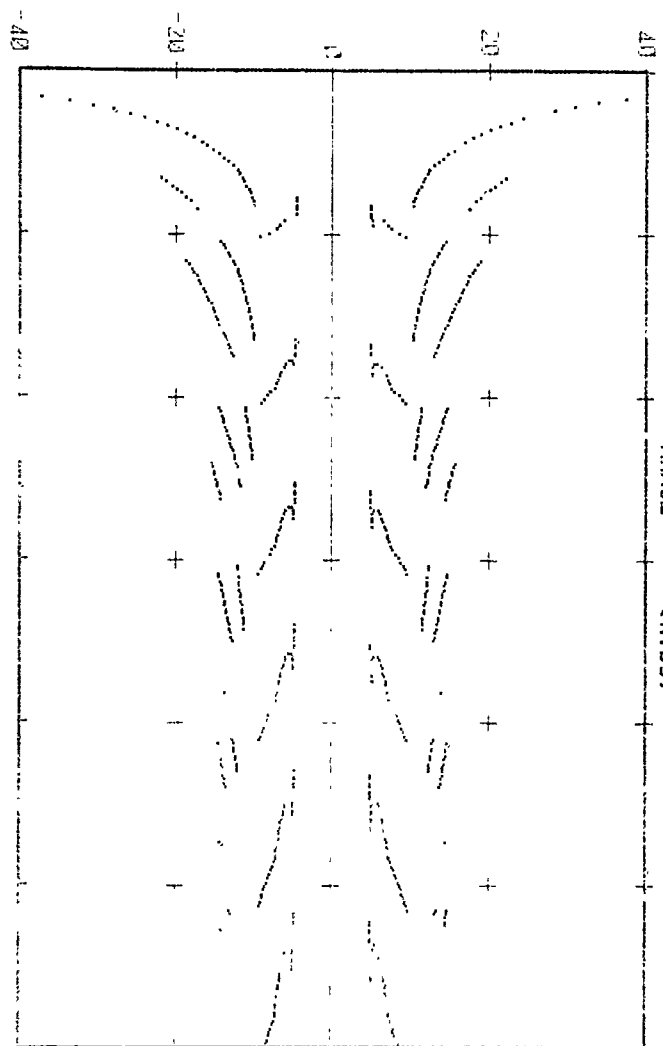
S 20 R 60 F 600

1450 M/S 1500 1550

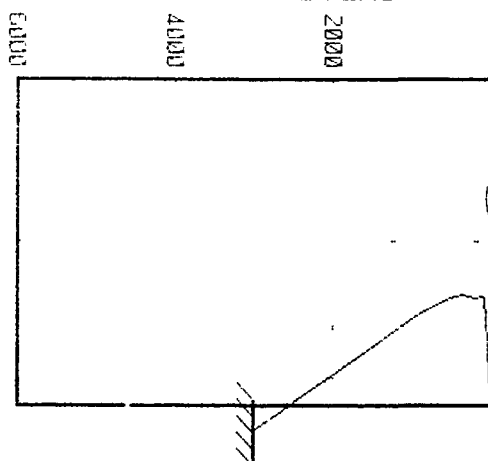
DB LOSS



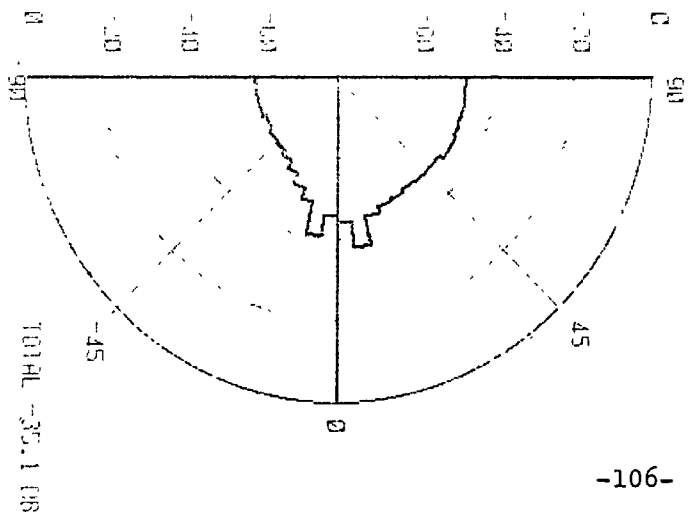
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

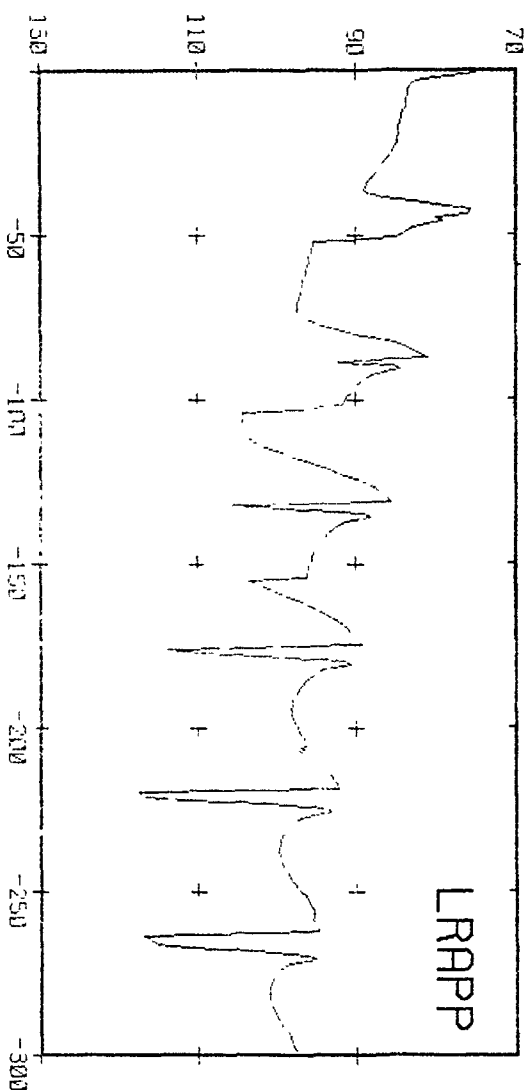


RRER 38 SUMMER

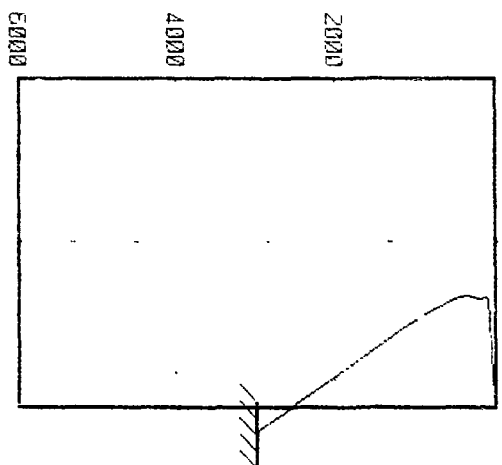
S 50 R 60 F 600

1450 1455 1500 1550

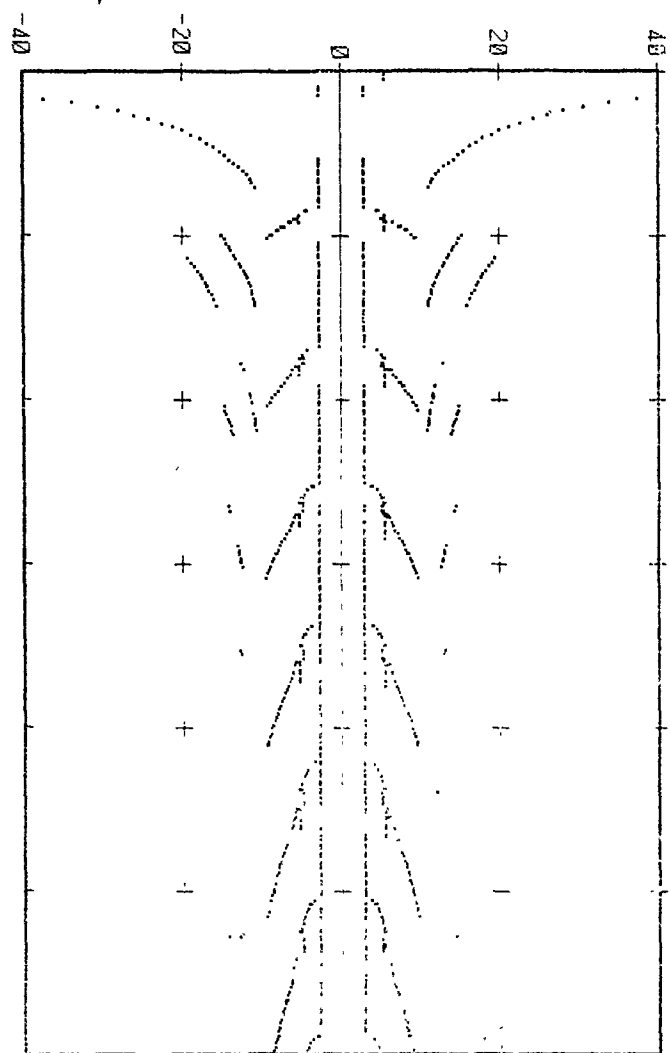
DB LOSS



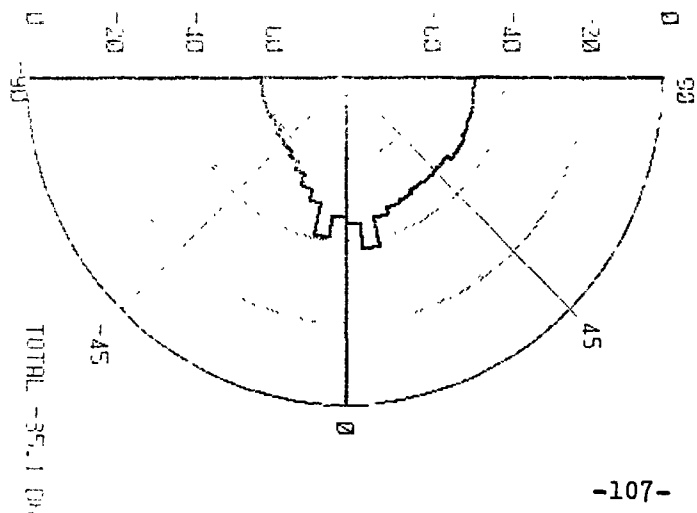
DEPTH IN METERS



ARRIVAL ANGLE



NOISE (DB)

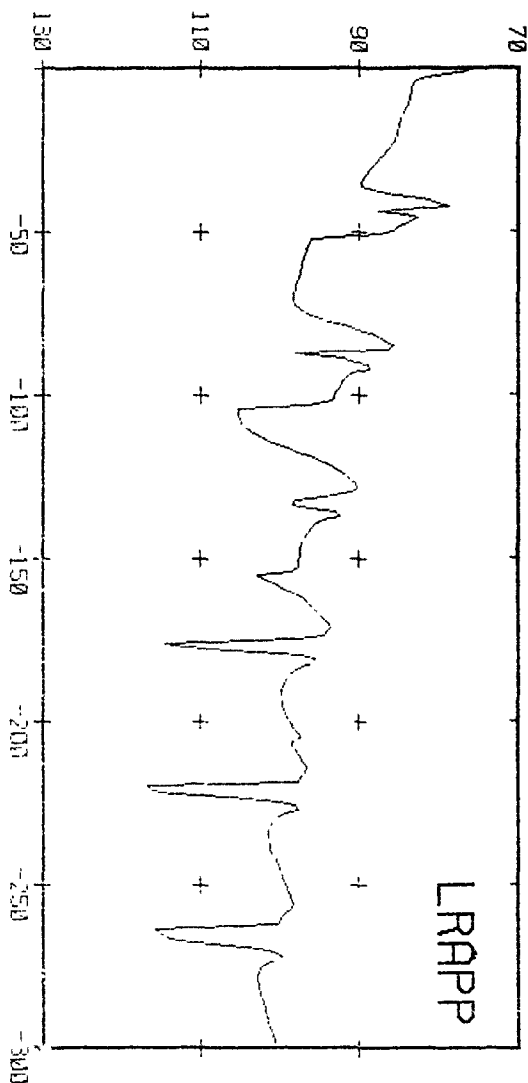


AREA 98 SUMMER

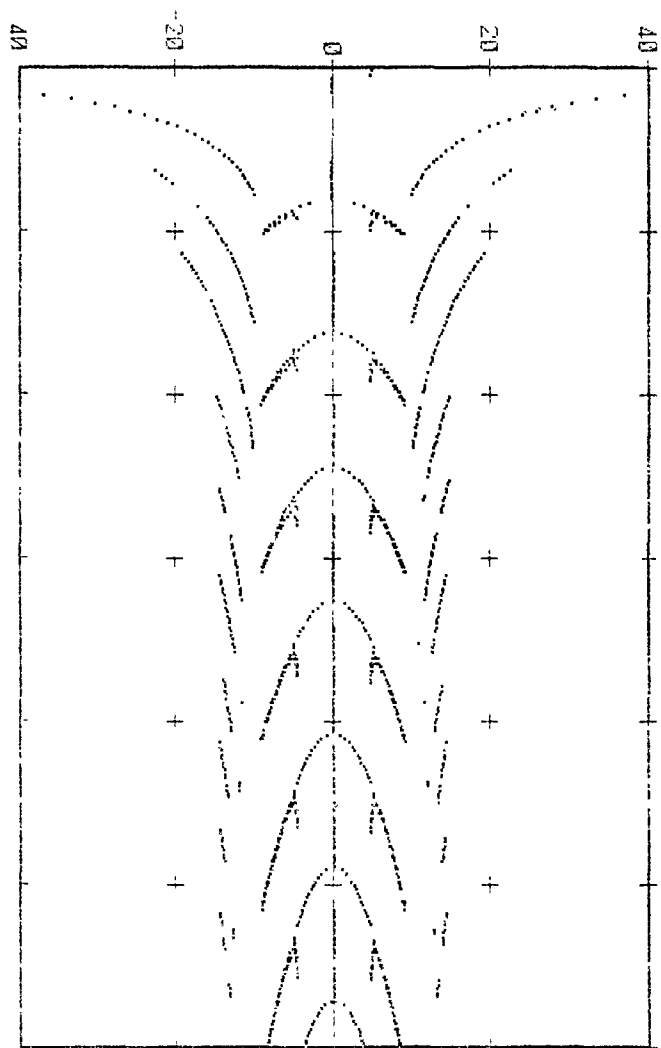
S 233 R 60 F 600

LRAPP

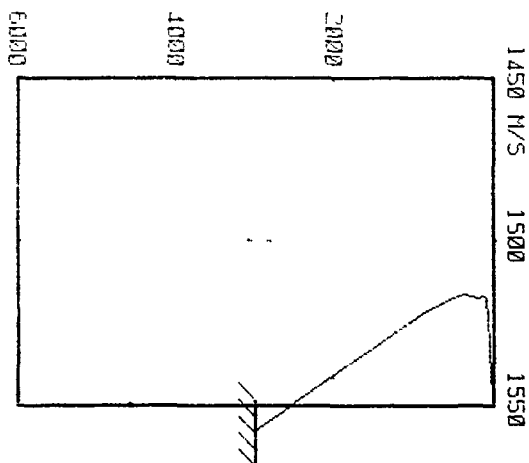
DB LOSS



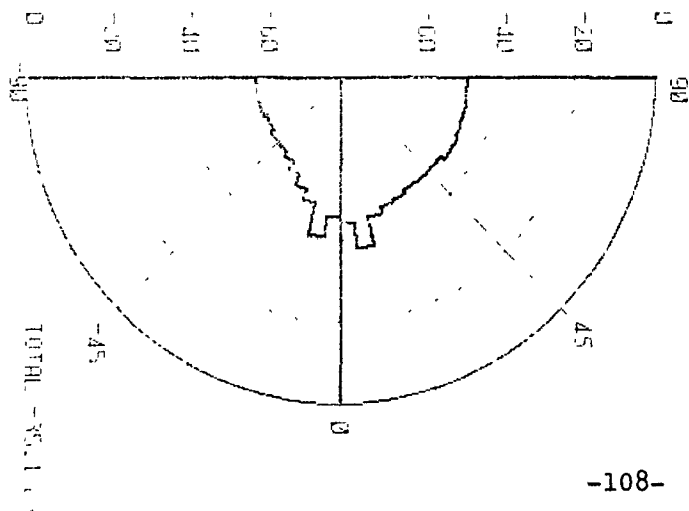
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

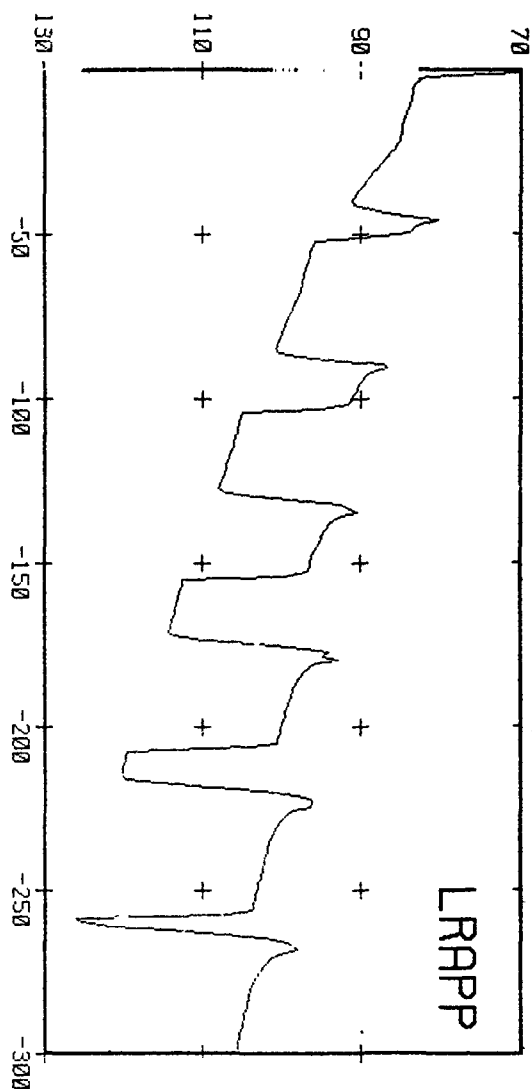


AREA 3B SUMMER

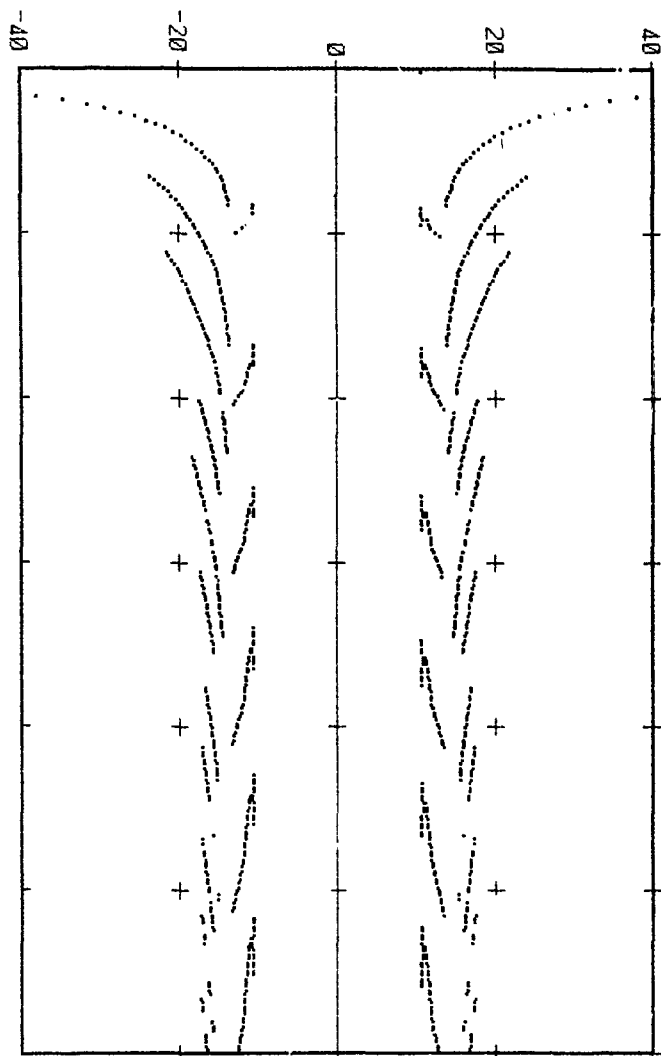
S 20 R 300 F 600

LRAPP

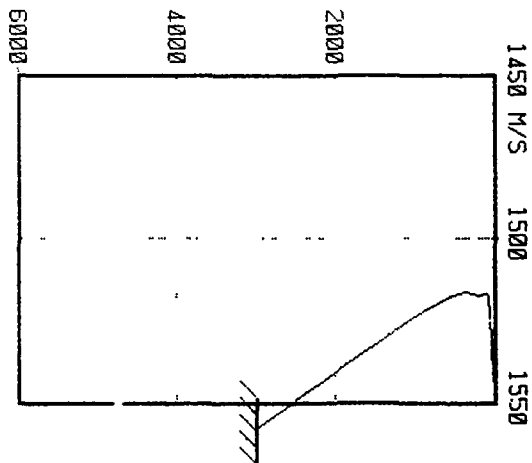
DB LOSS



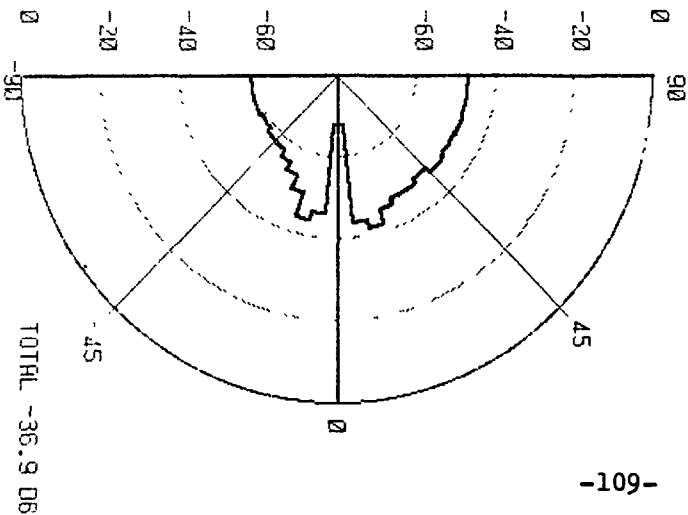
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

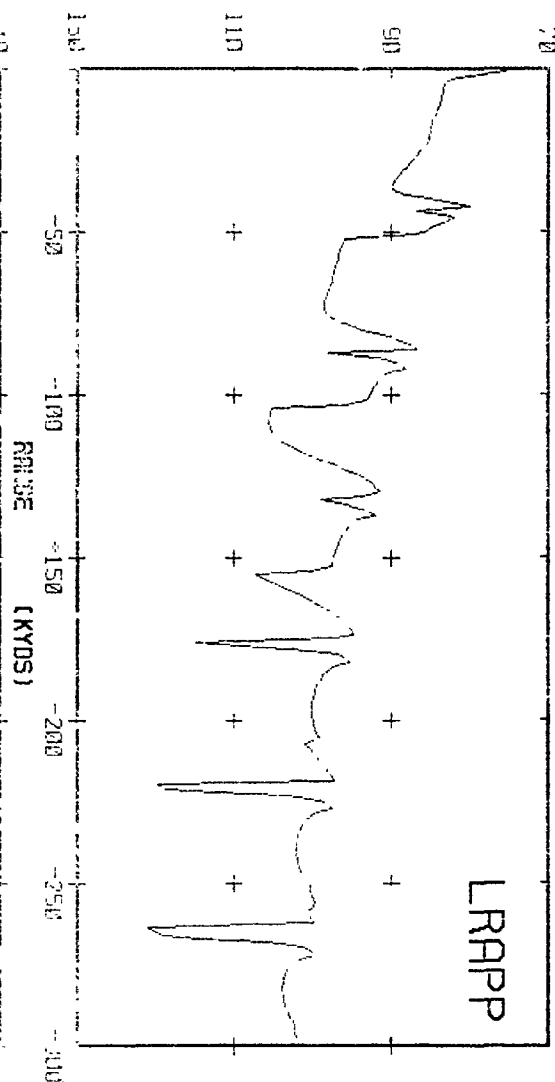


MSS RIRER 38 SUMMER

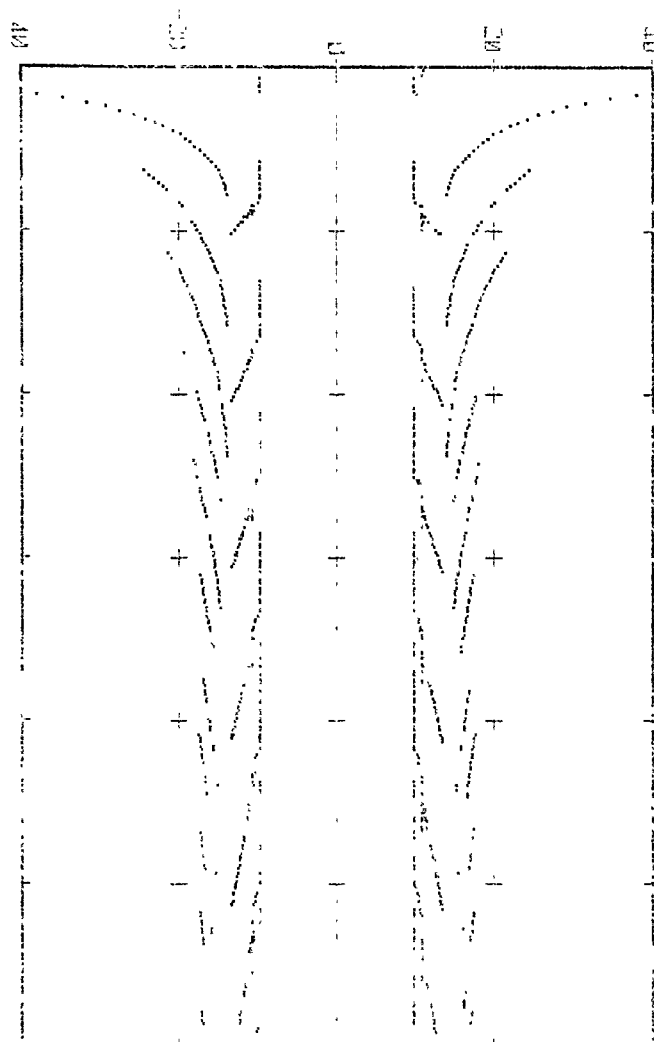
S 50 R 300 F 600

1450 M/S 1500 1550

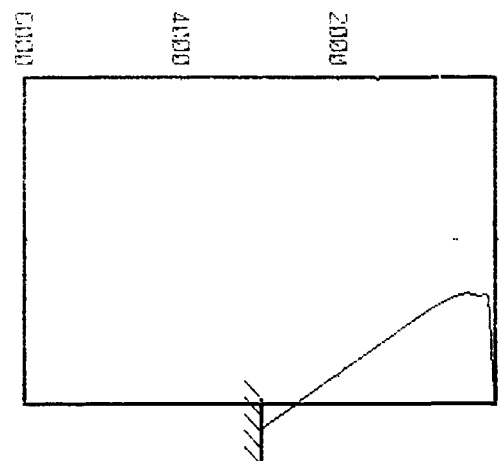
DB LOSS



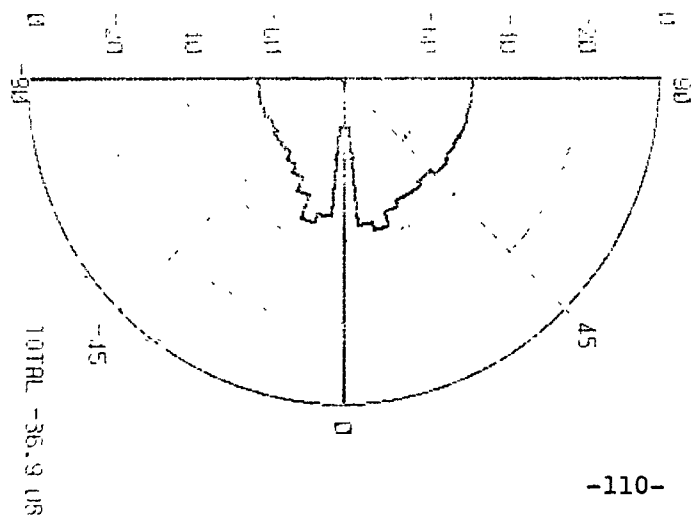
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



AREA 38 SUMMER

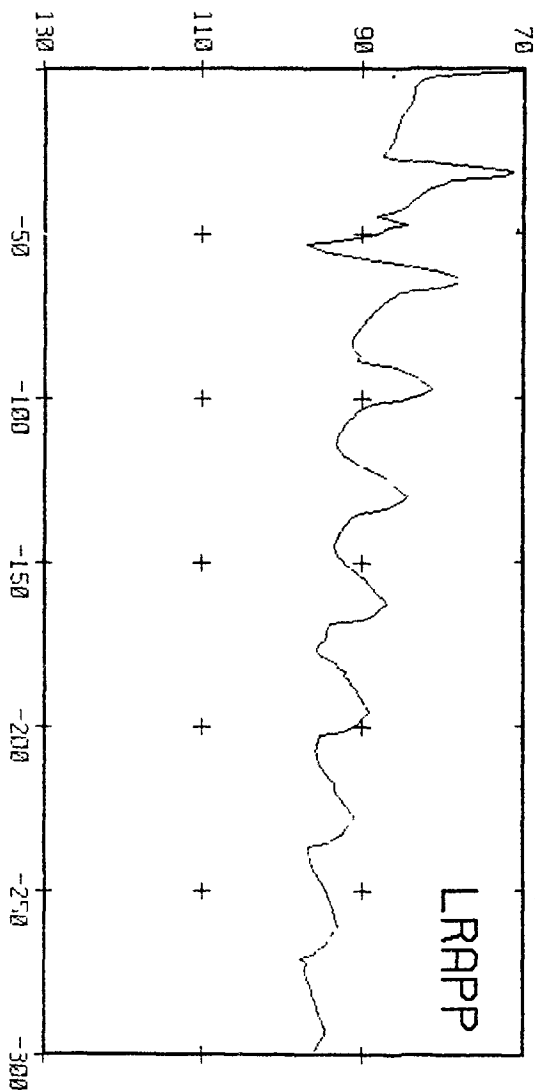
S 233 R 300 F 600

1450 M/S

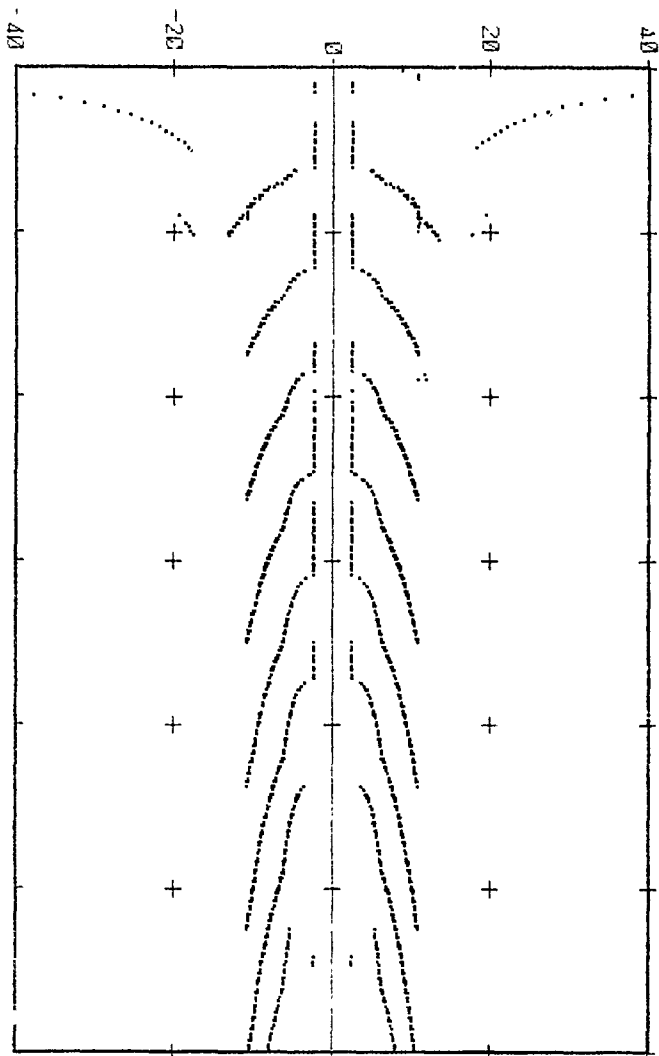
1500

1550

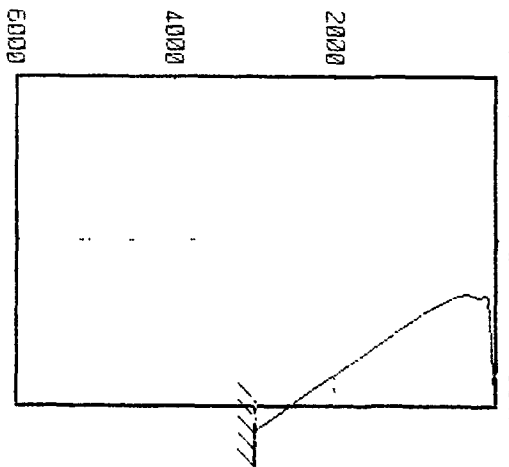
DB LOSS



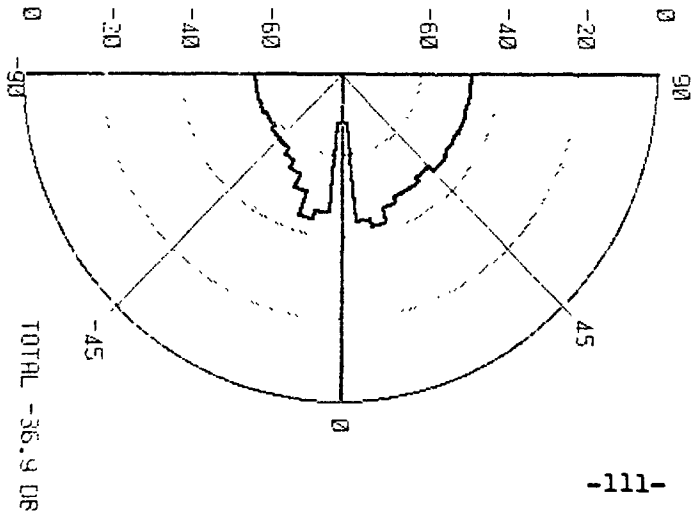
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



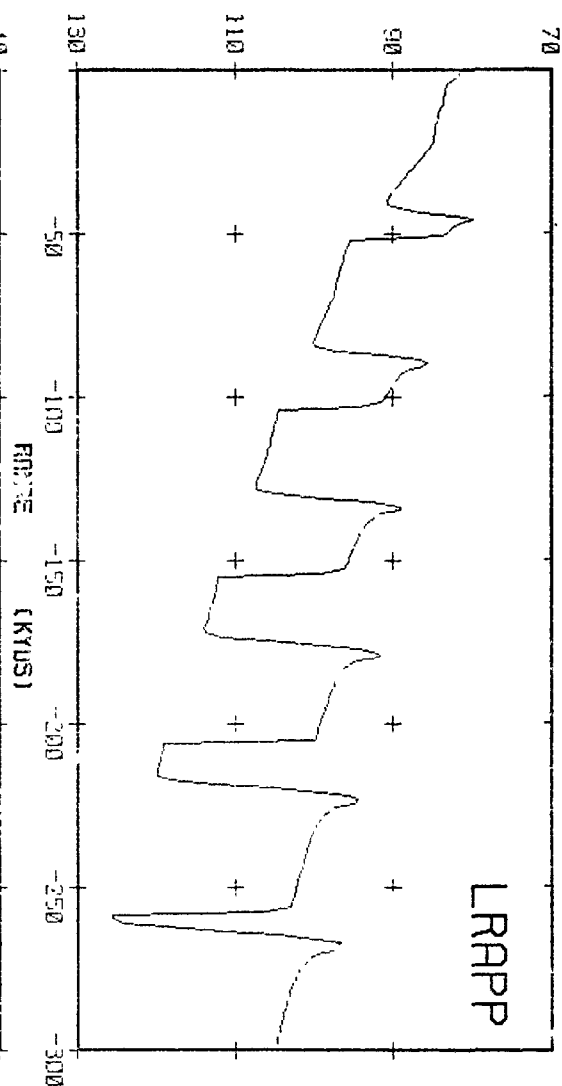
AREA 3B SUMMER

S 20 R 133 F 600

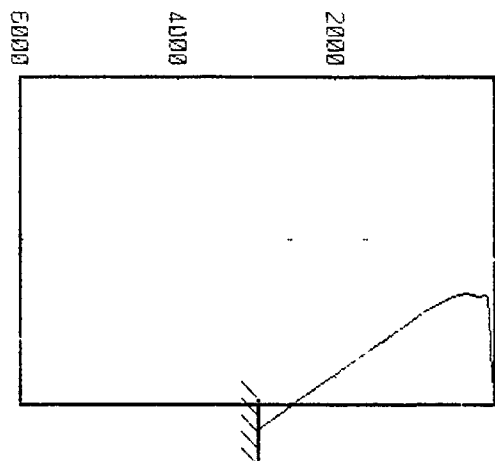
1450 M/S 1500

1550

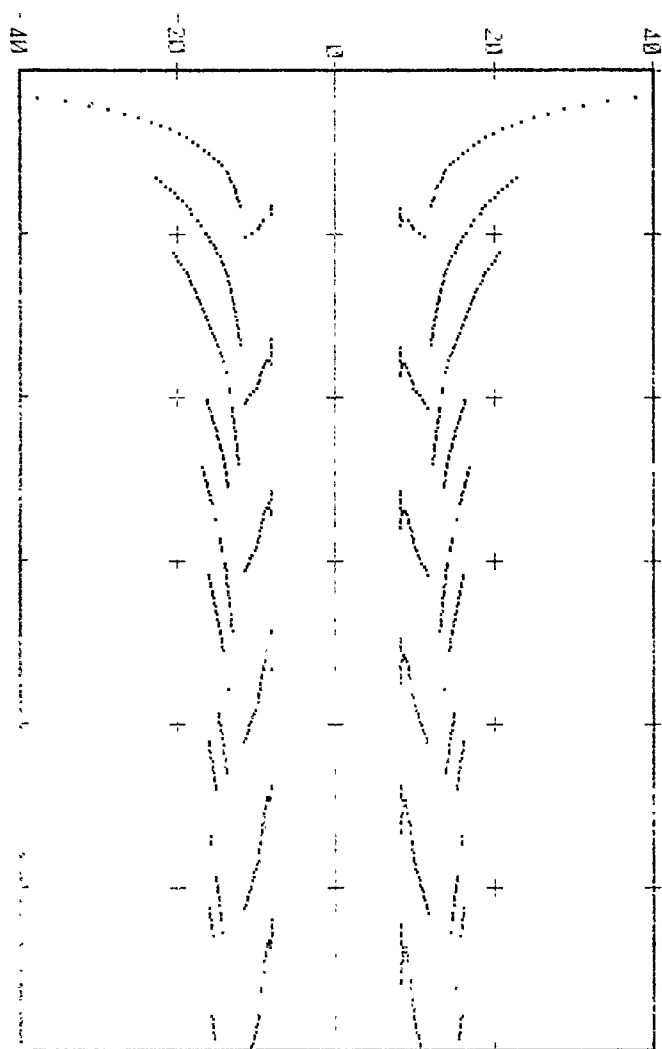
DB LOSS



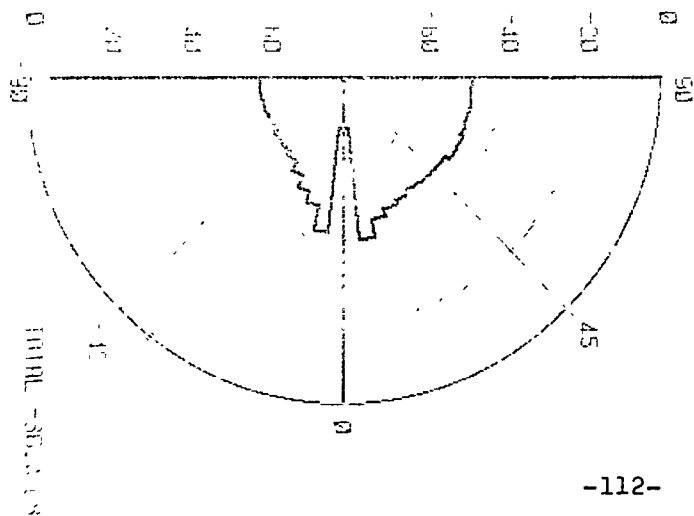
DEPTH IN METERS



ARRIVAL ANGLE



NOISE (DB)





AREA 3B SUMMER

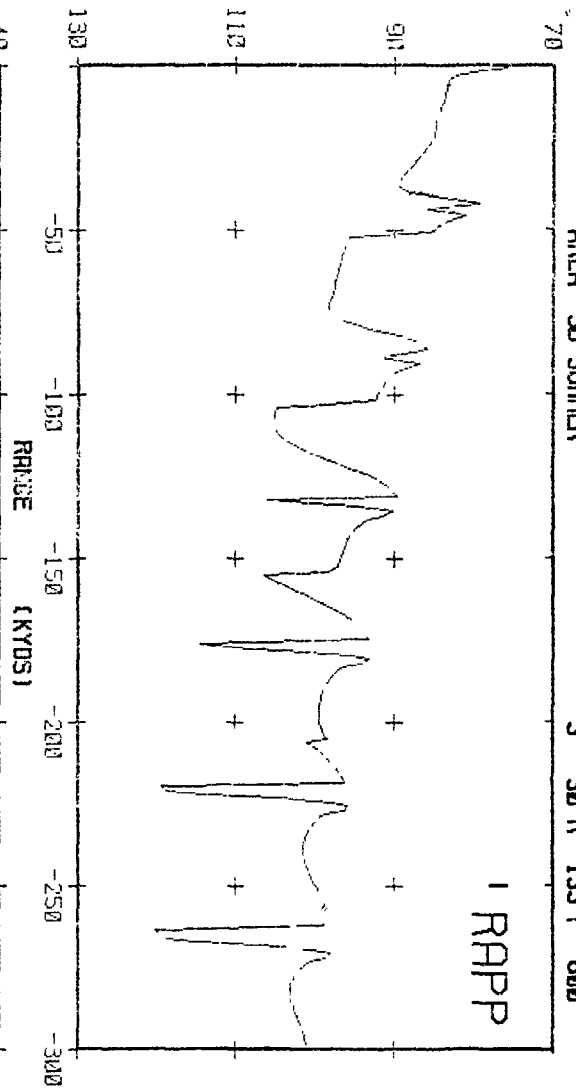
S 50 R 133 F 600

1450 M/S

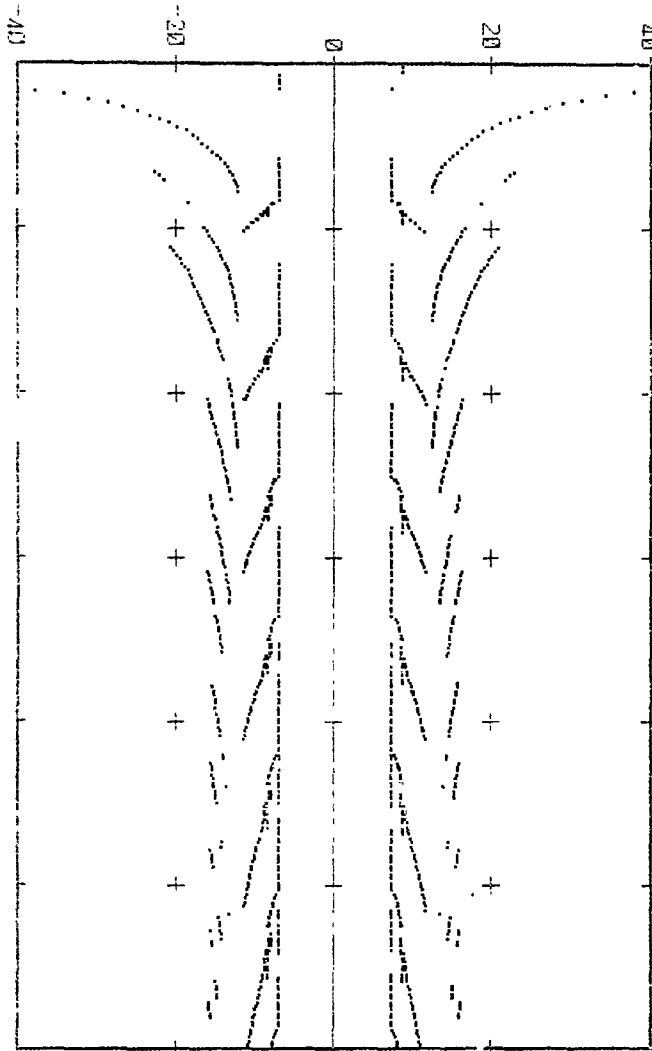
1500

1550

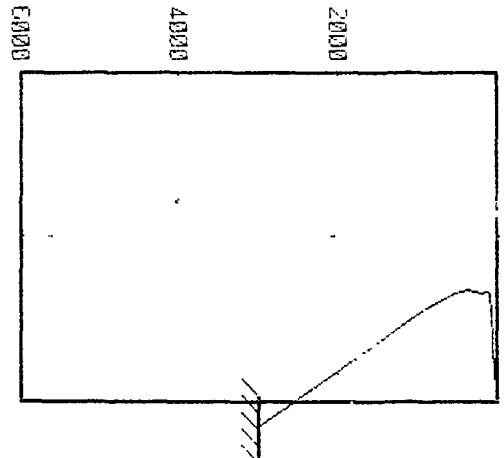
DB LOSS



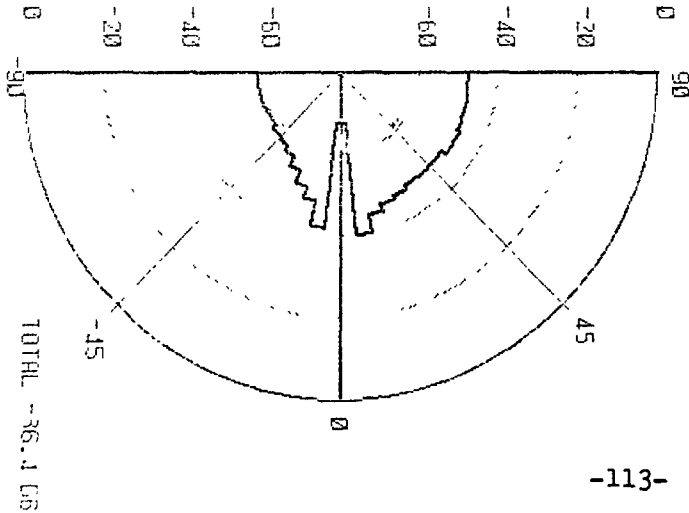
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



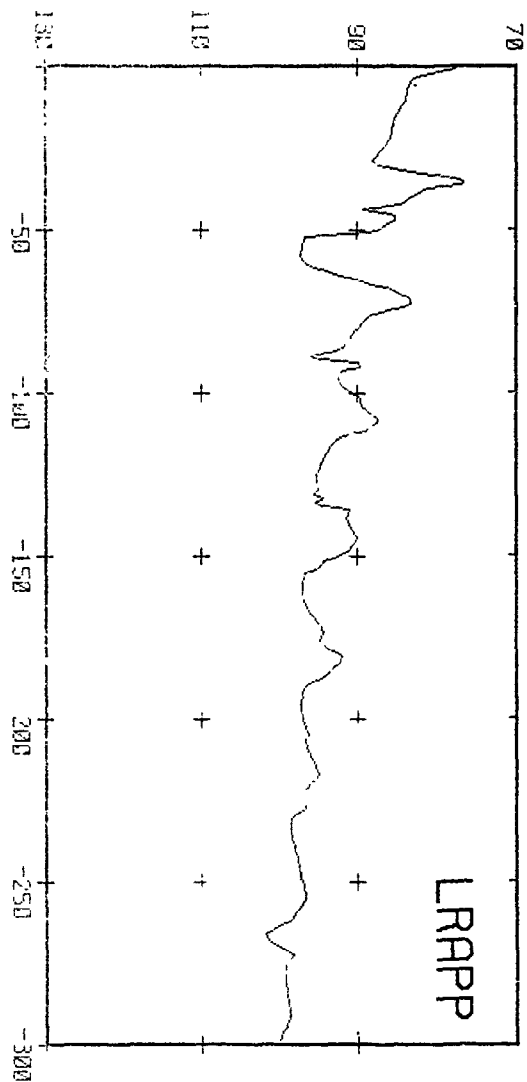
AREA 3B SUMMER

S 233 R 133 F 600

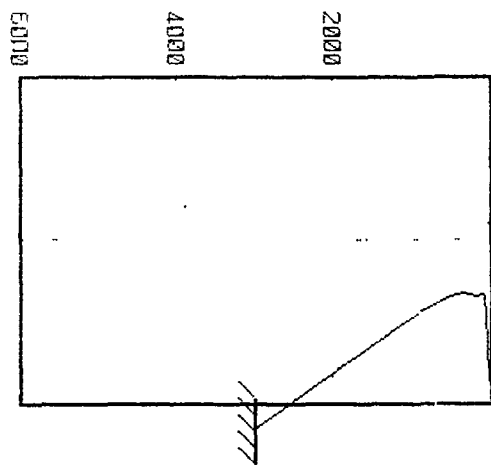
1450 M/S 1500

1550

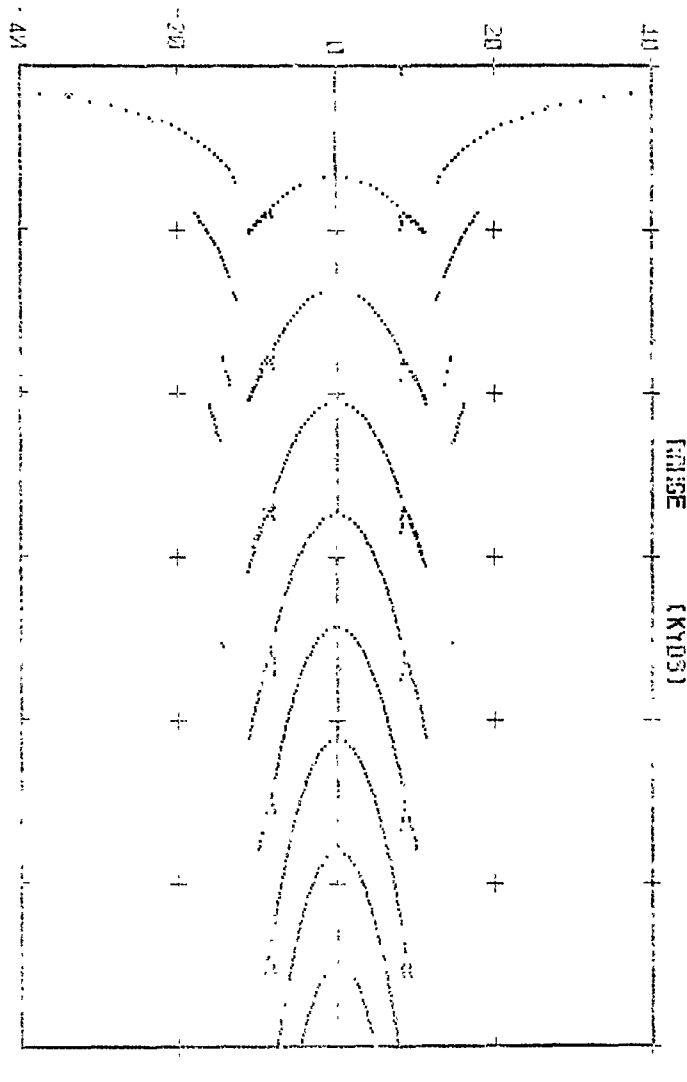
DB LOSS



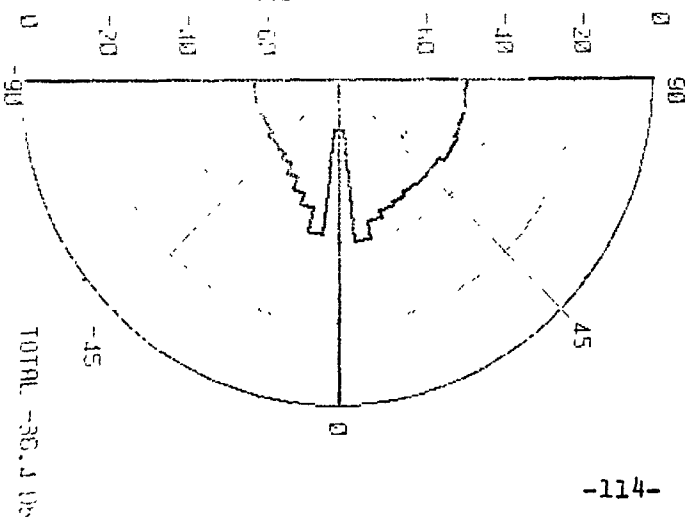
DEPTH IN METERS



ARRIVAL ANGLE



NOISE (DB)



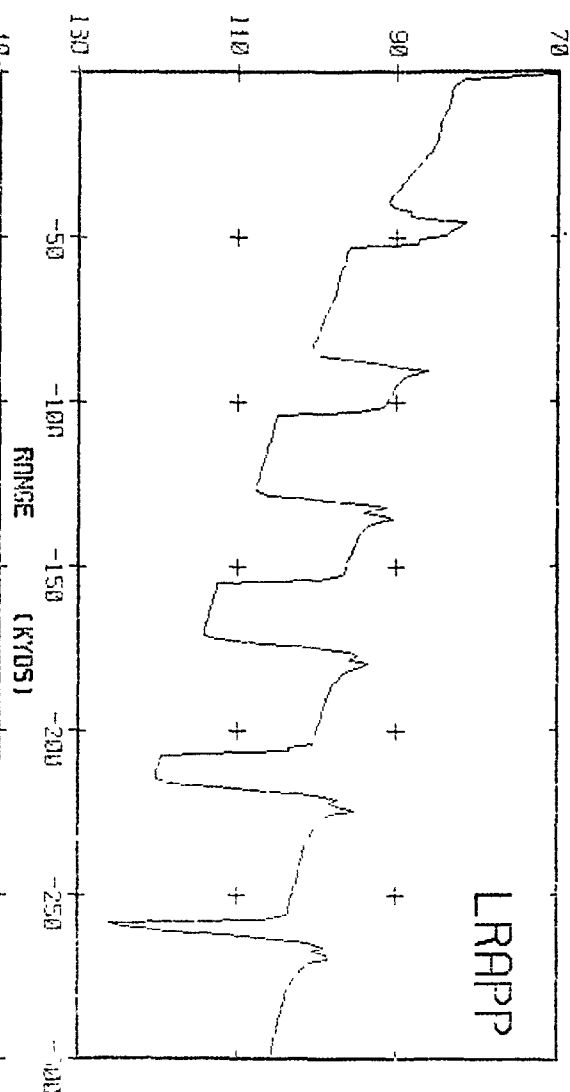
AREA 3B SUMMER

S 20 R 600 F 600

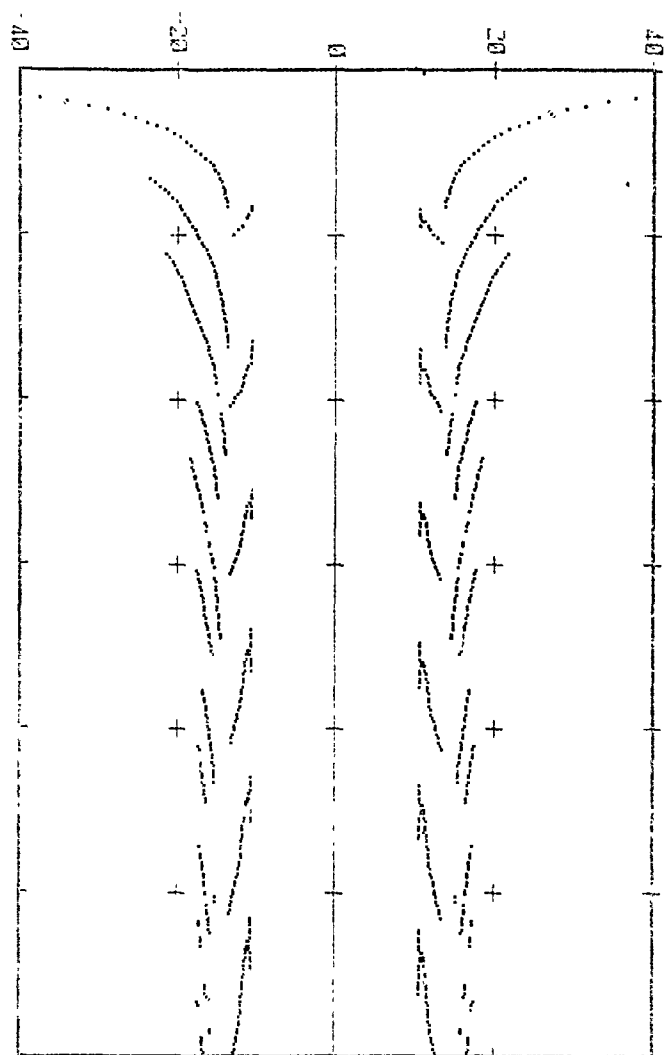
1450 M/S 1500

1550

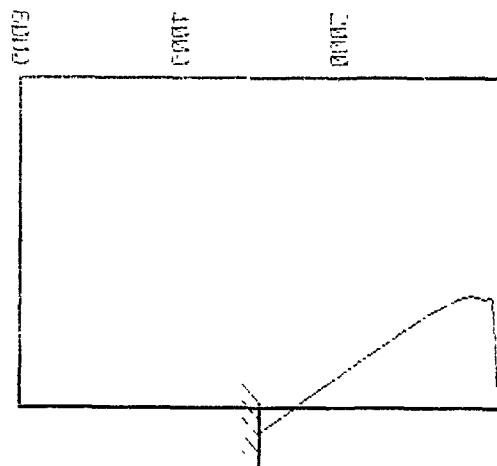
DB LOSS



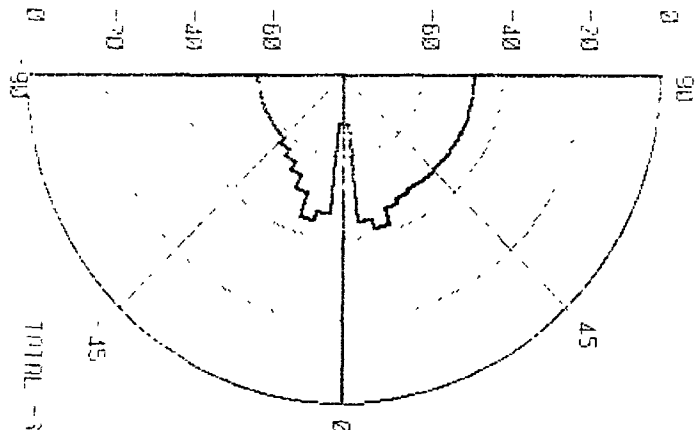
ARRIVAL ANGLE

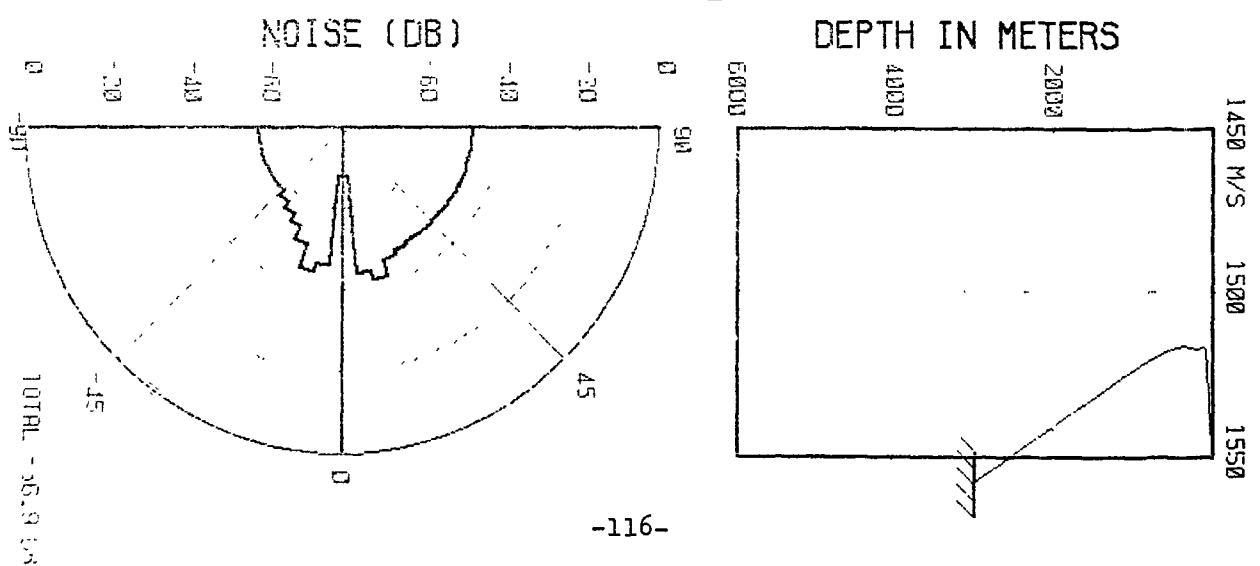
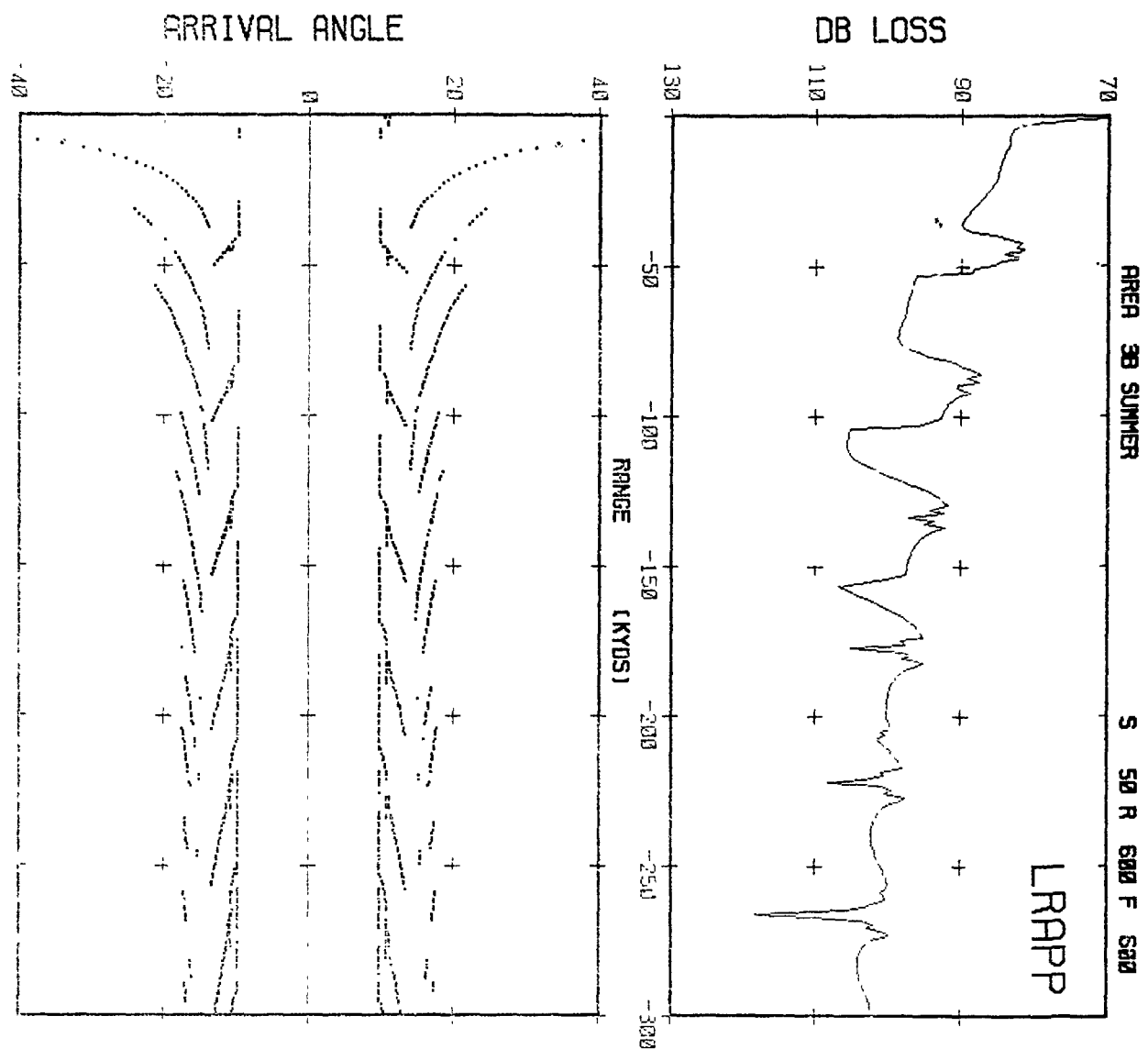


DEPTH IN METERS



NOISE (DB)



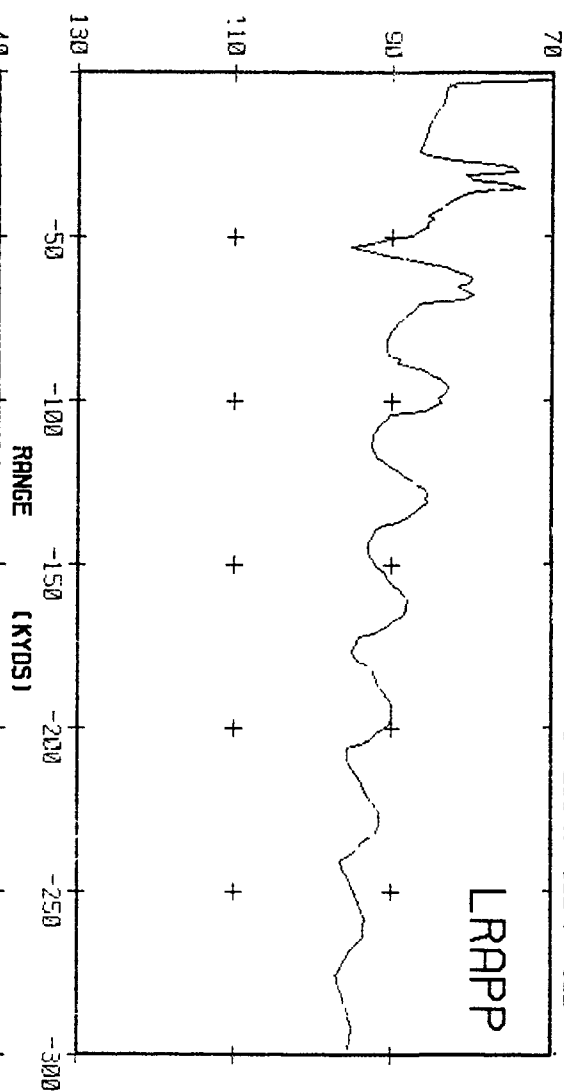


AREA 38 SUMMER

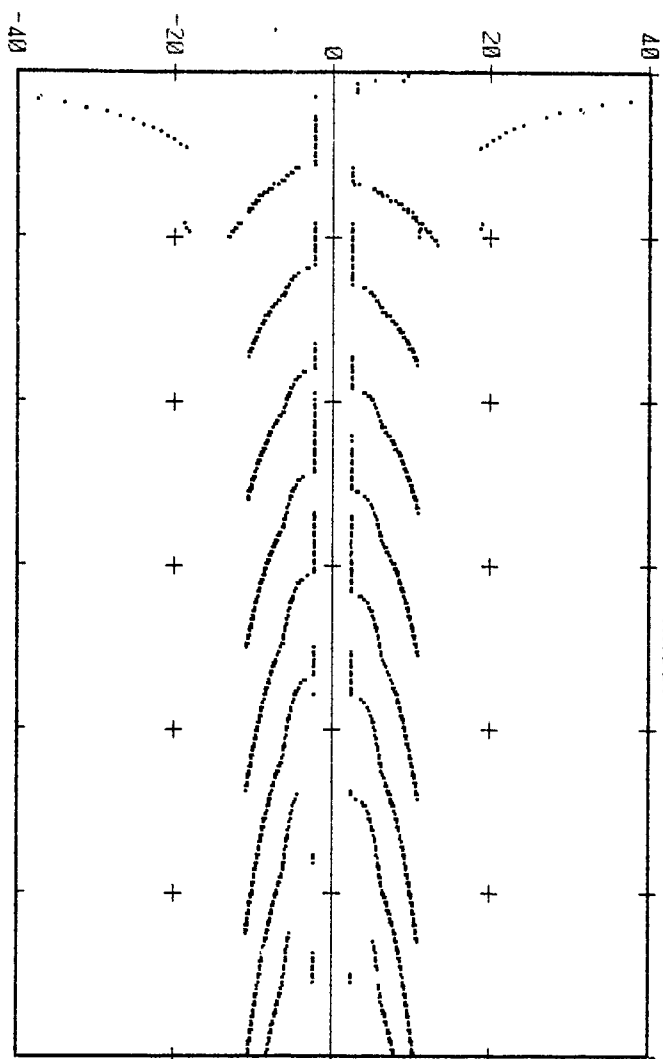
S 233 R 600 F 600

LRAPP

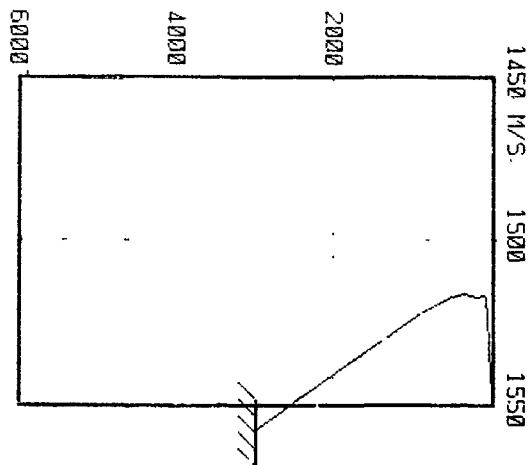
DB LOSS



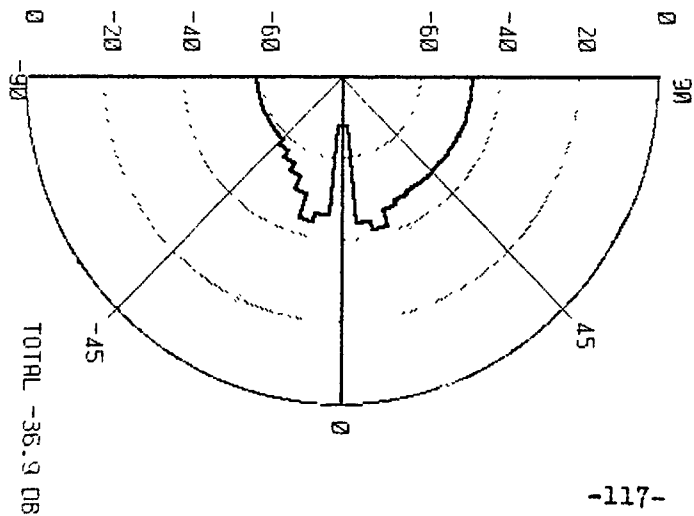
ARRIVAL ANGLE

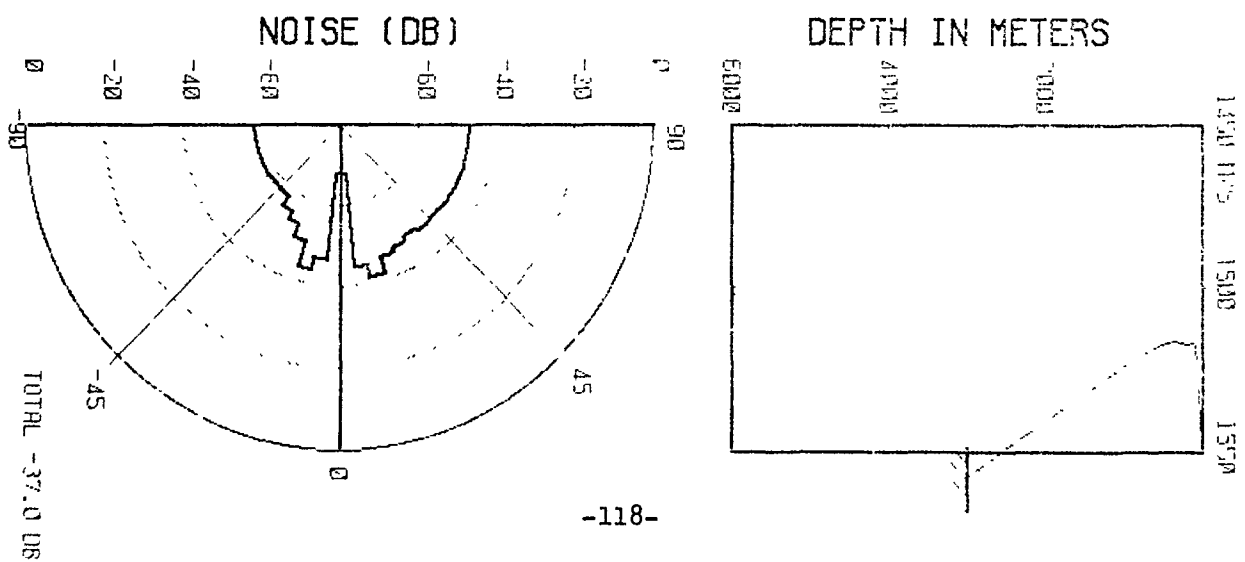
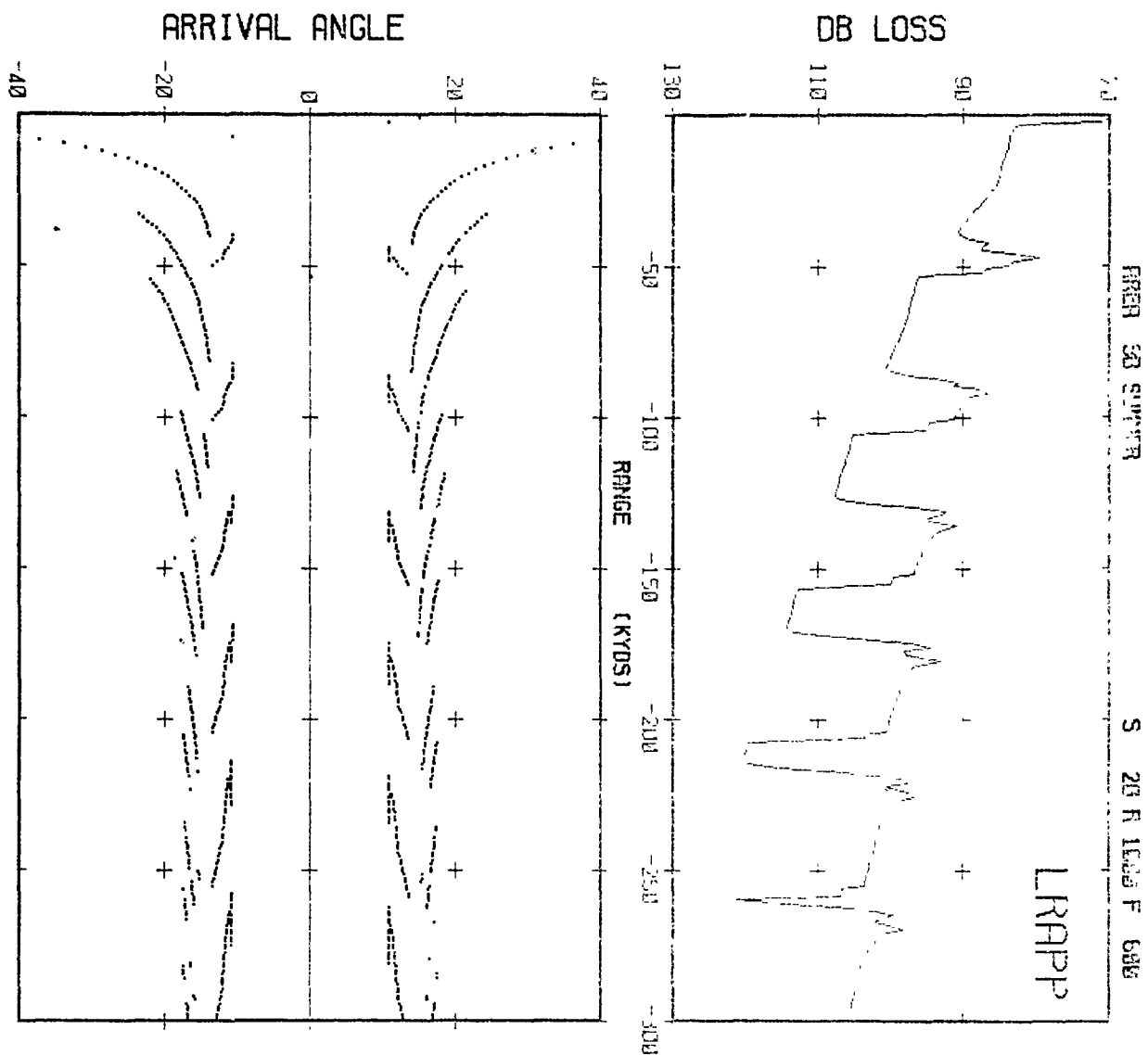


DEPTH IN METERS



NOISE (DB)



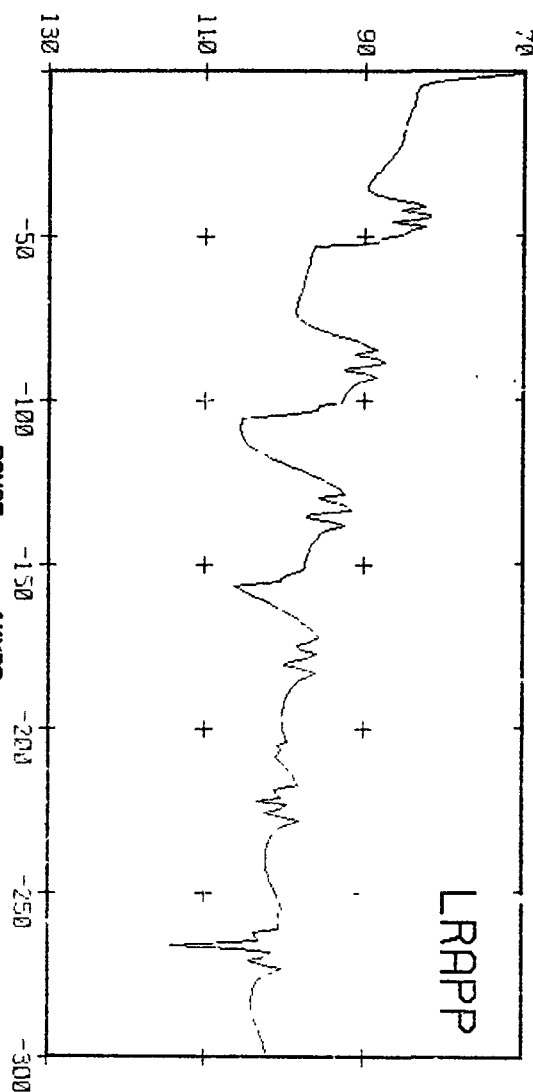


AREA 3B SUMMER

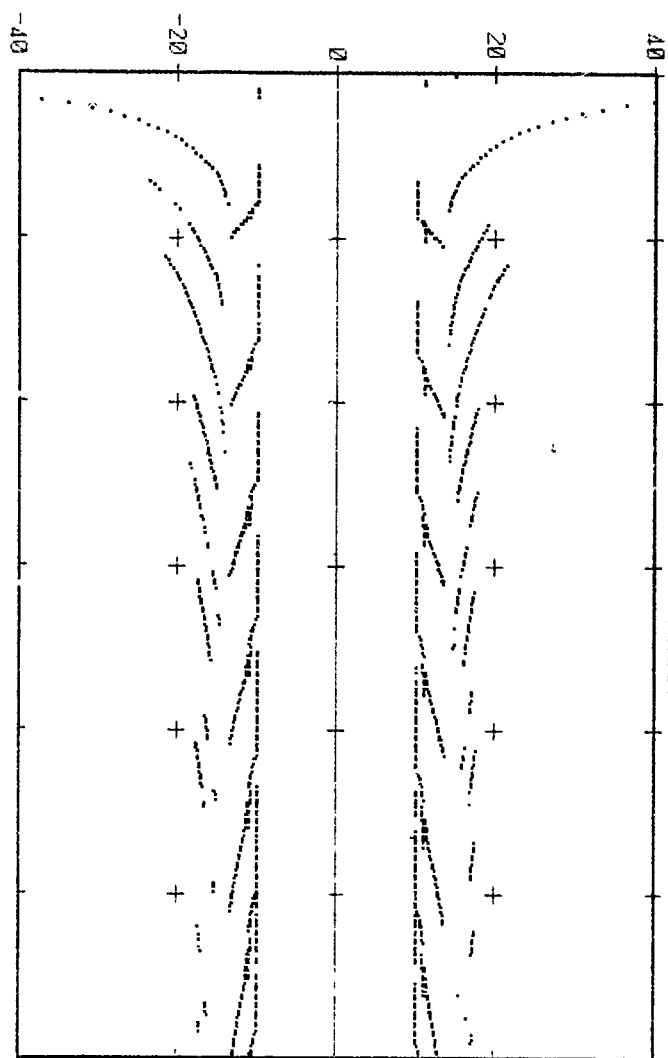
S 50 R 1000 F 600

1450 H/S 1500 1550

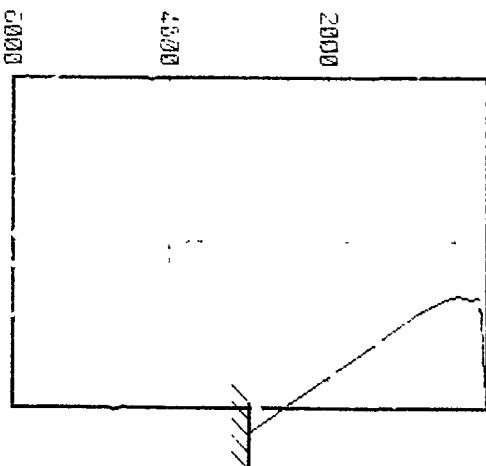
DB LOSS



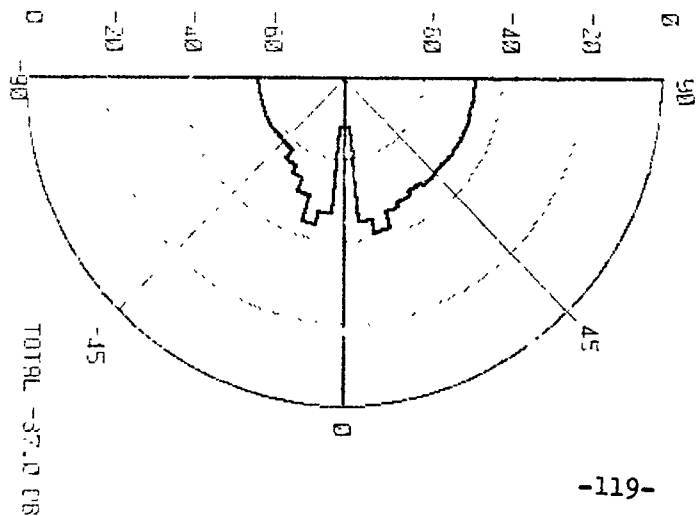
ARRIVAL ANGLE

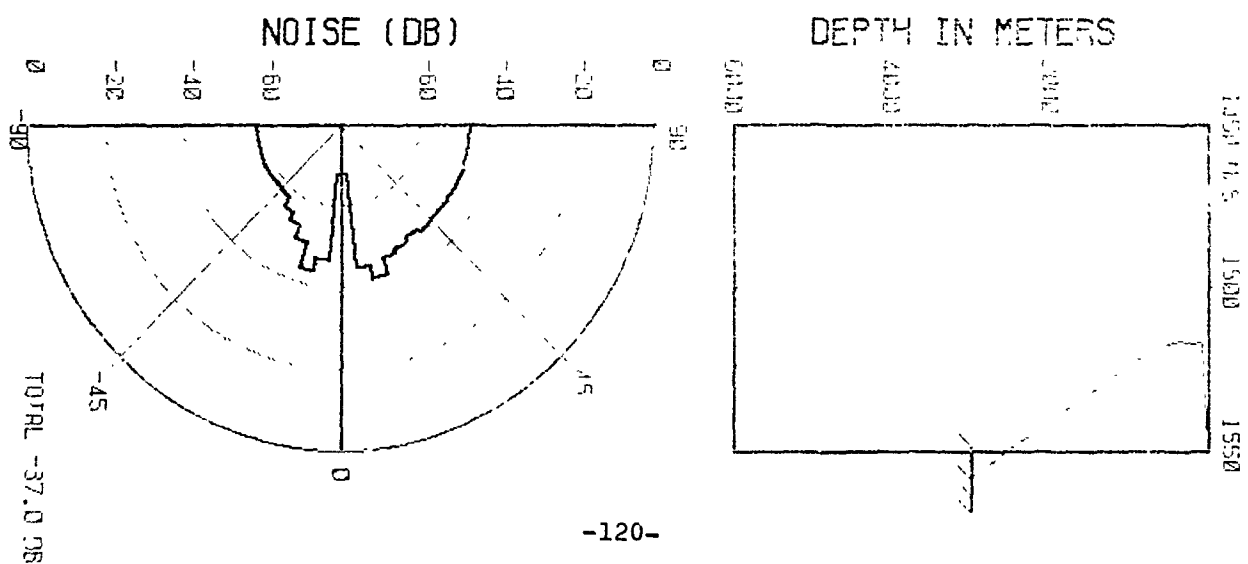
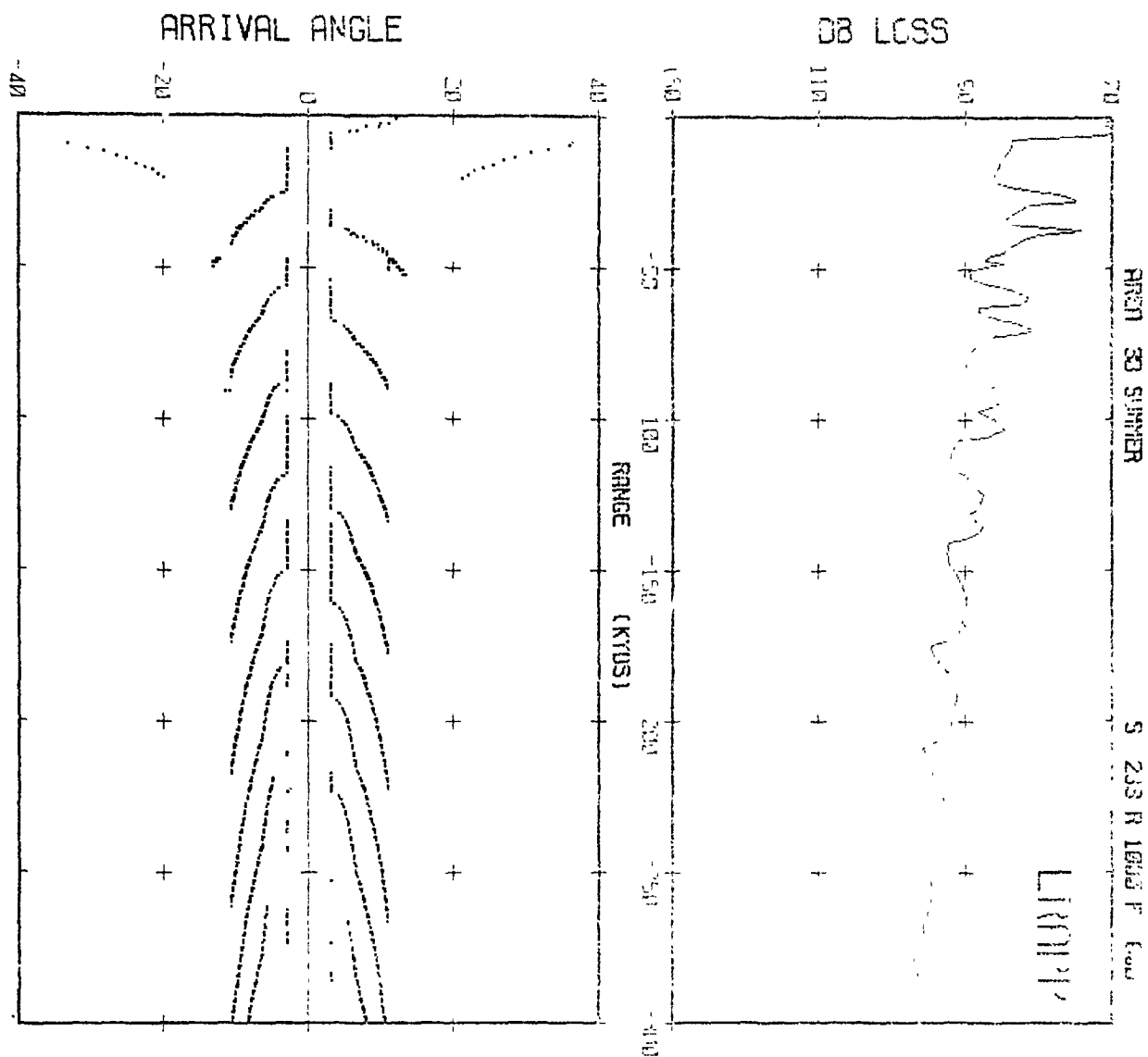


DEPTH IN METERS



NOISE (DB)





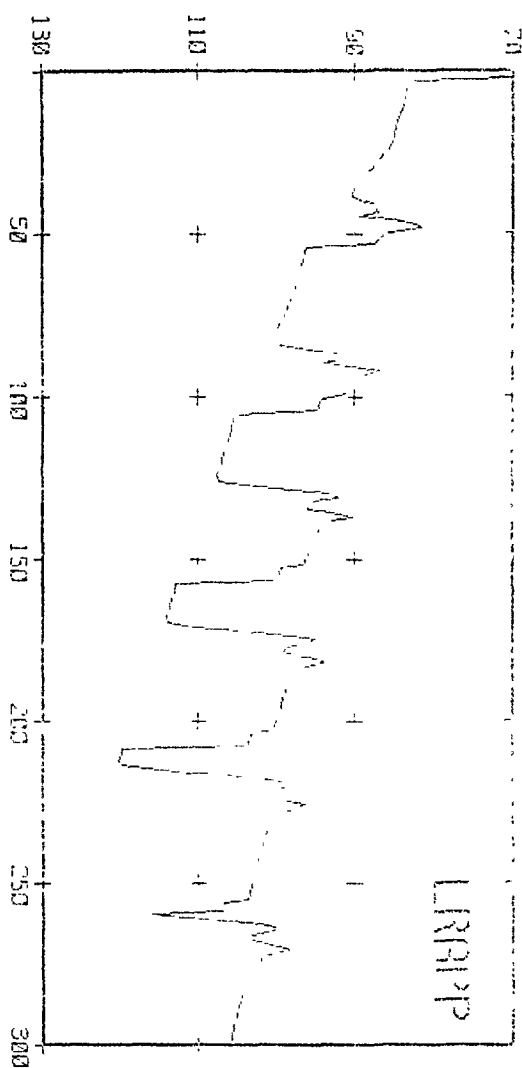


Final 33 Section

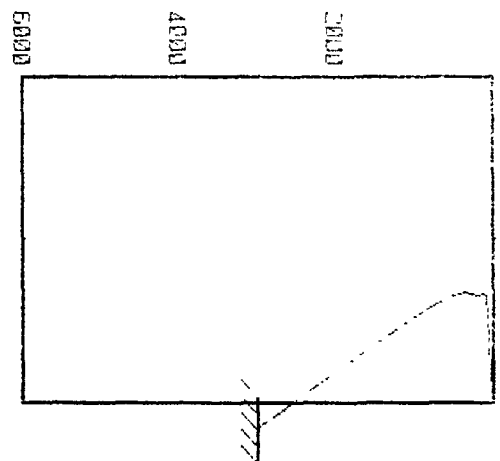
2. 30 N 150 E F. 600

1450 1455 1500 1550

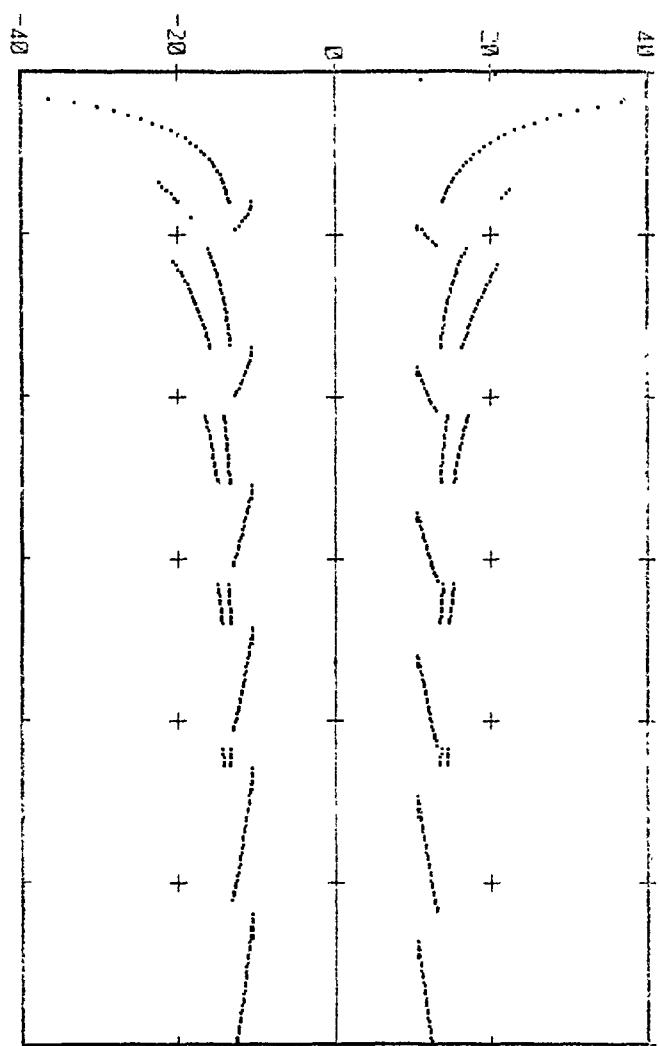
DB LOSS



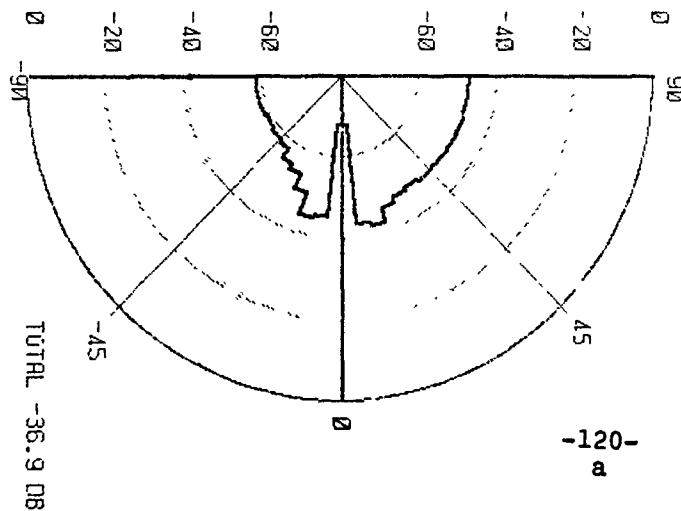
DEPTH IN METERS



ARRIVAL ANGLE

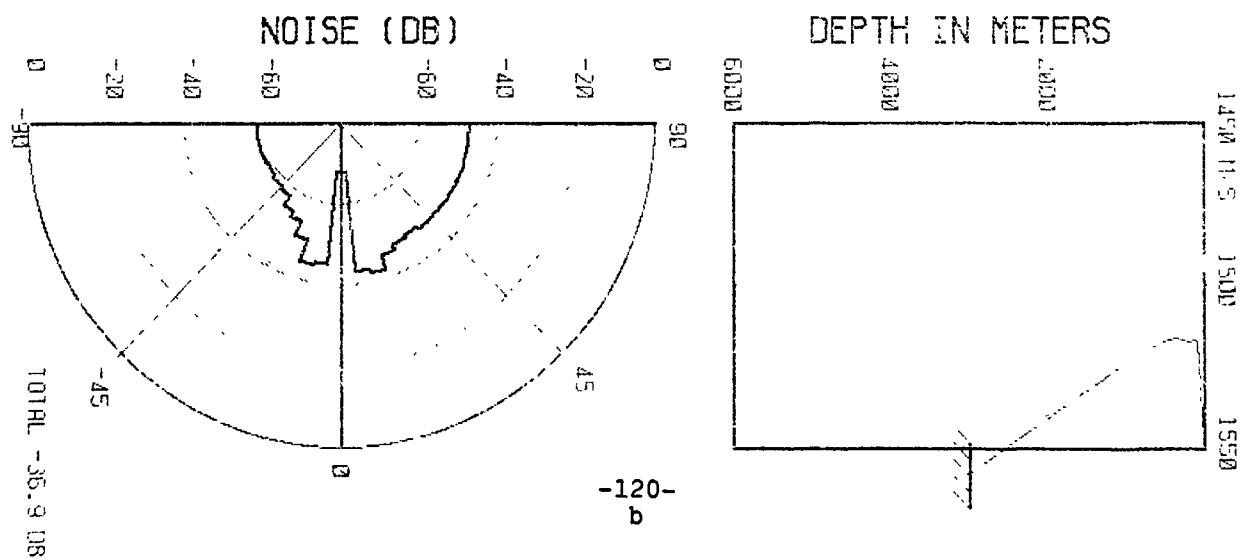
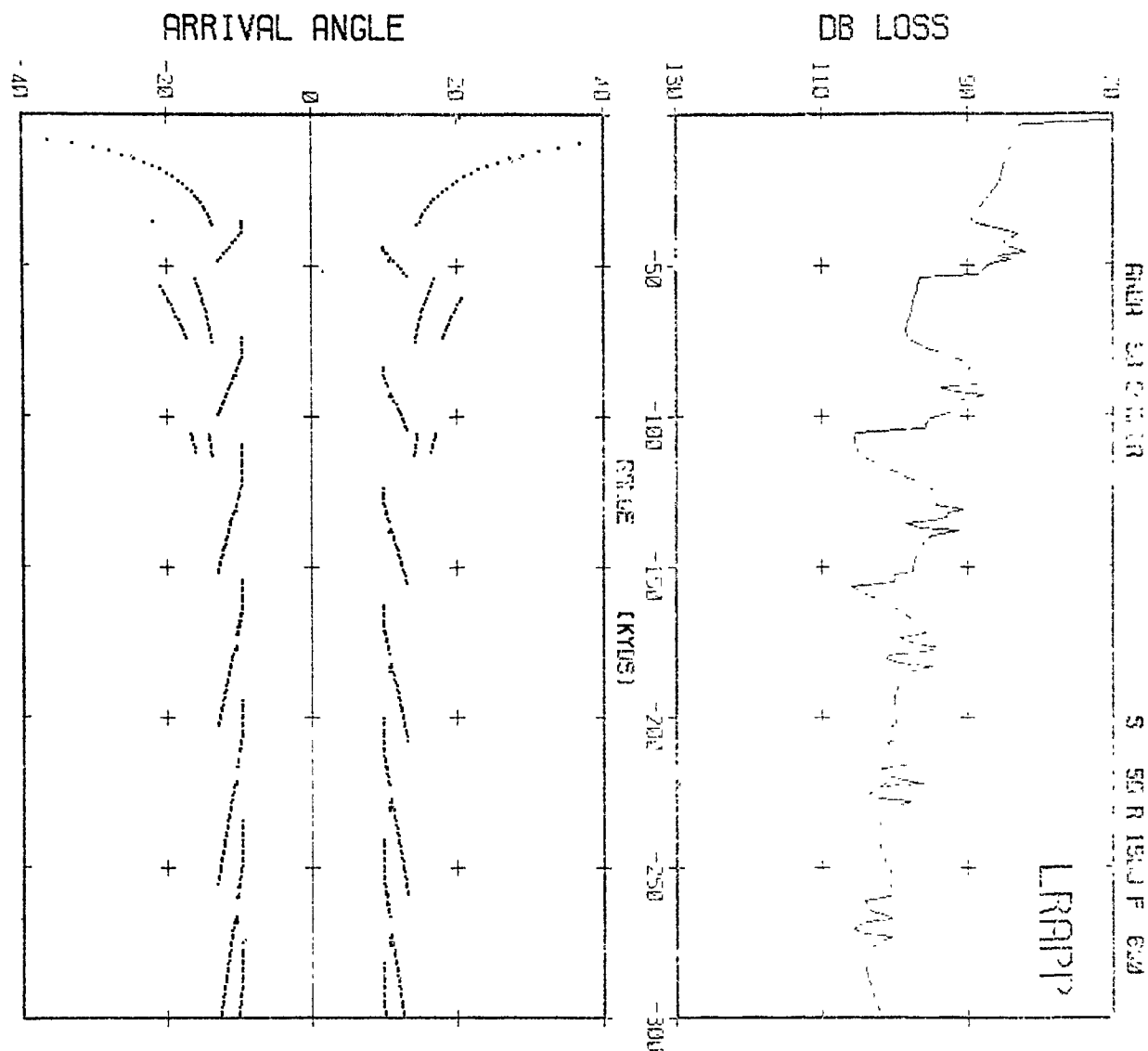


NOISE (DB)



-120-

TOTAL -36.9 DB

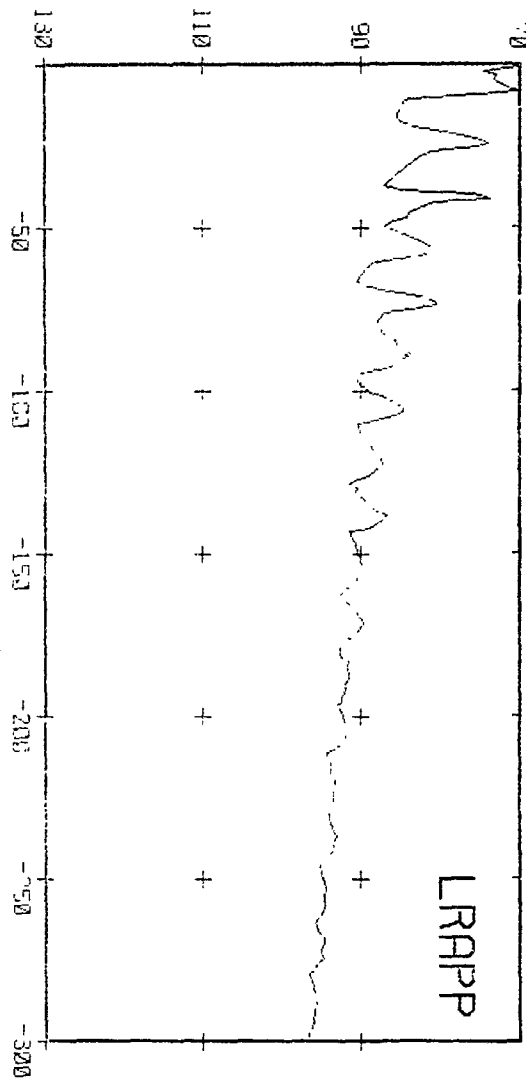


AREA 38 SUMMER

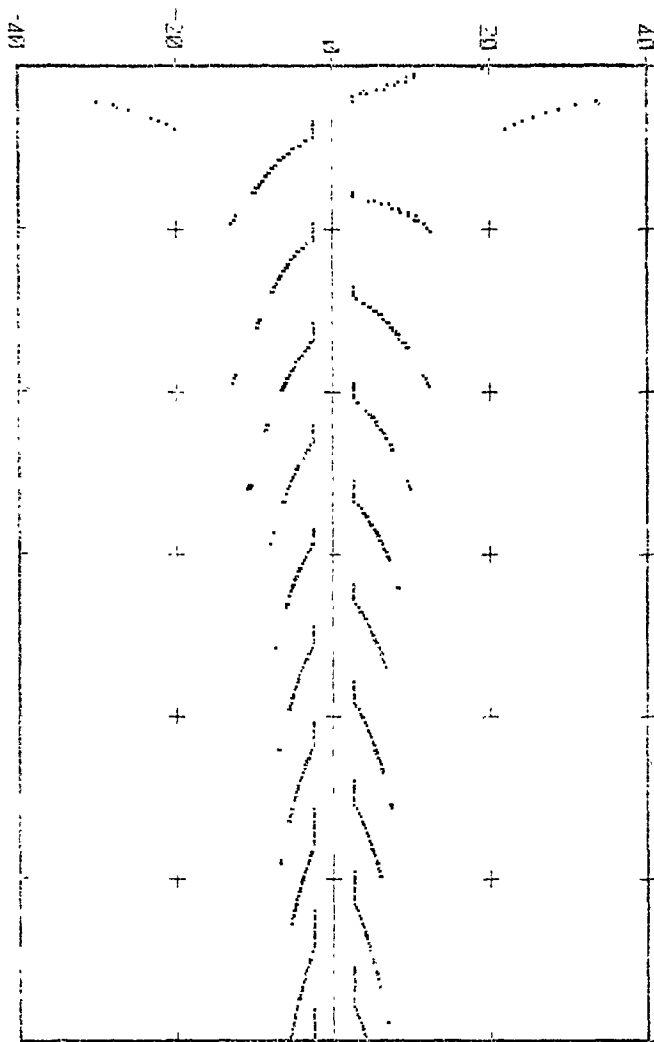
S 233 R 1500 F 600

1450 M/S 1500 1550

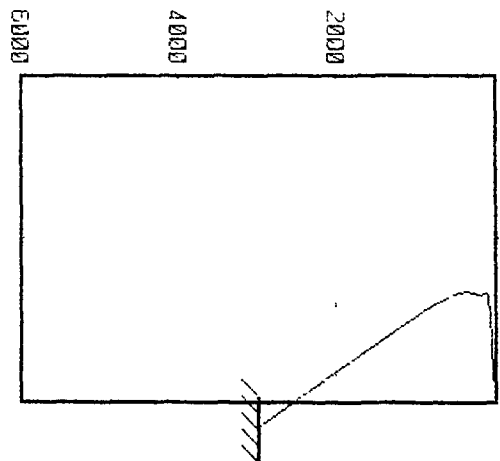
DB LOSS



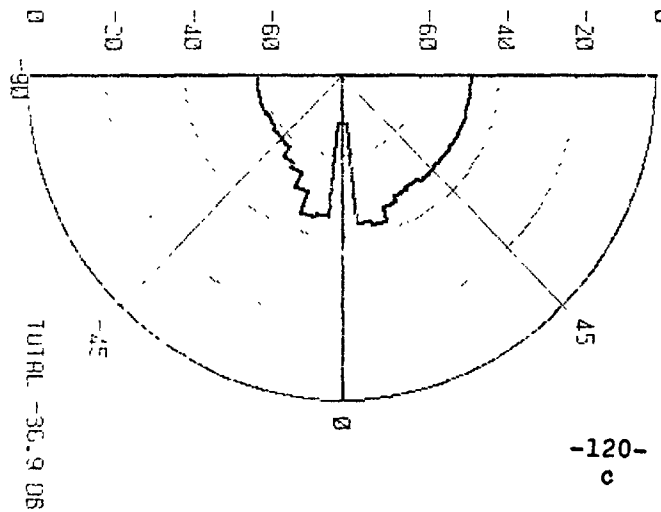
ARRIVAL ANGLE

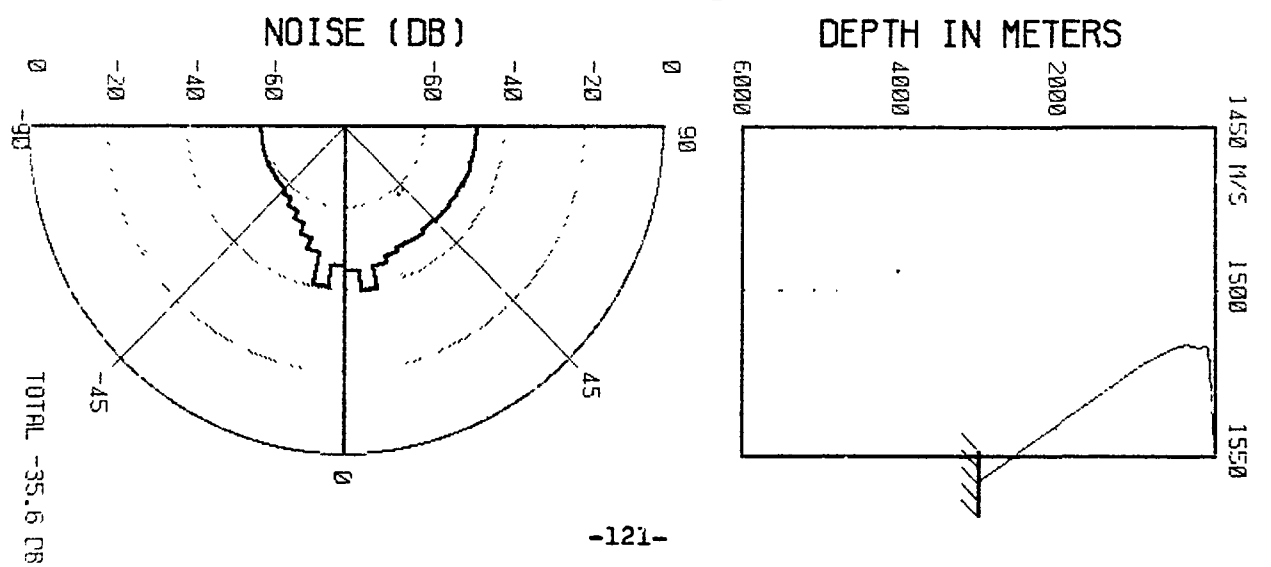
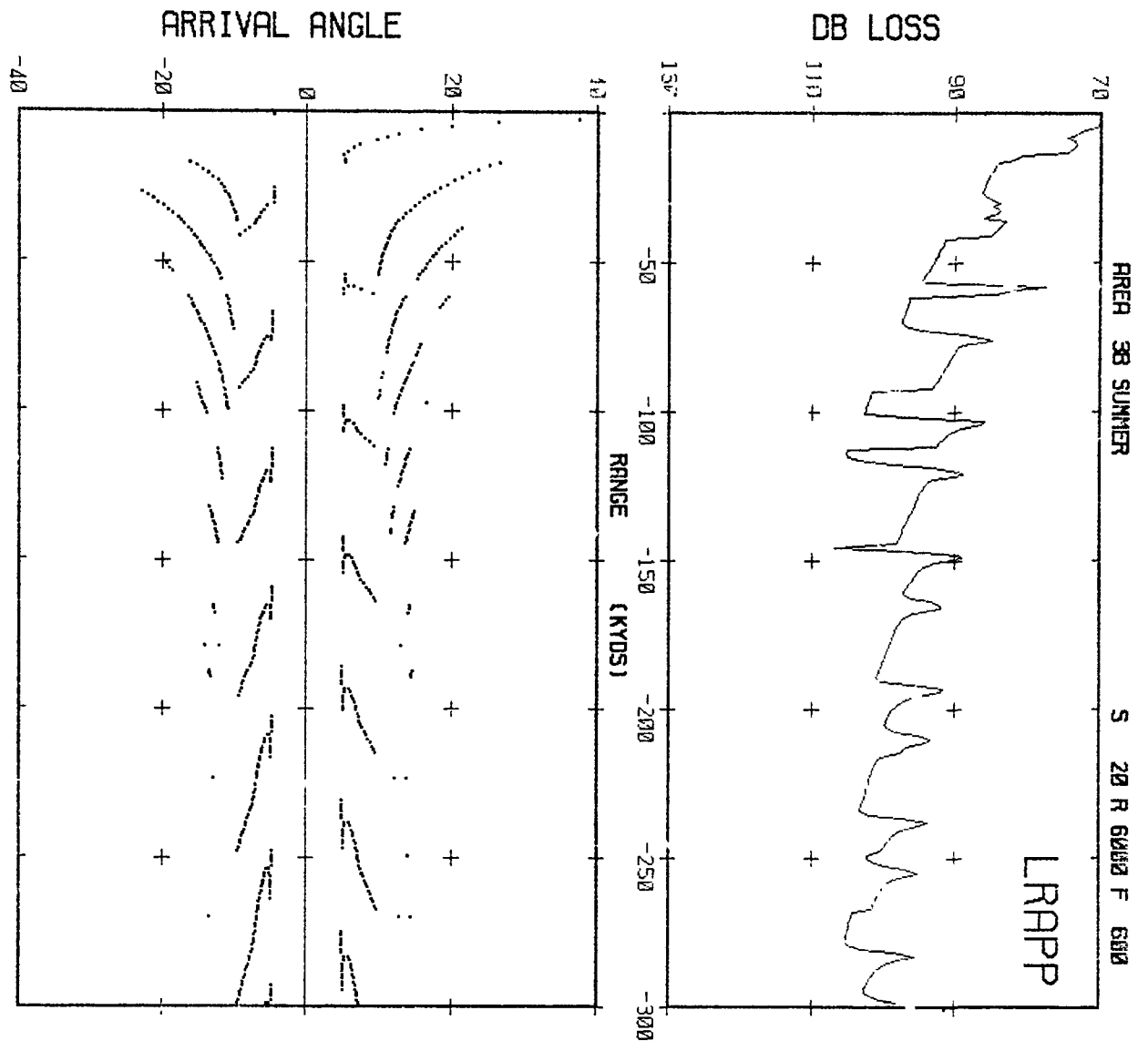


DEPTH IN METERS



NOISE (DB)



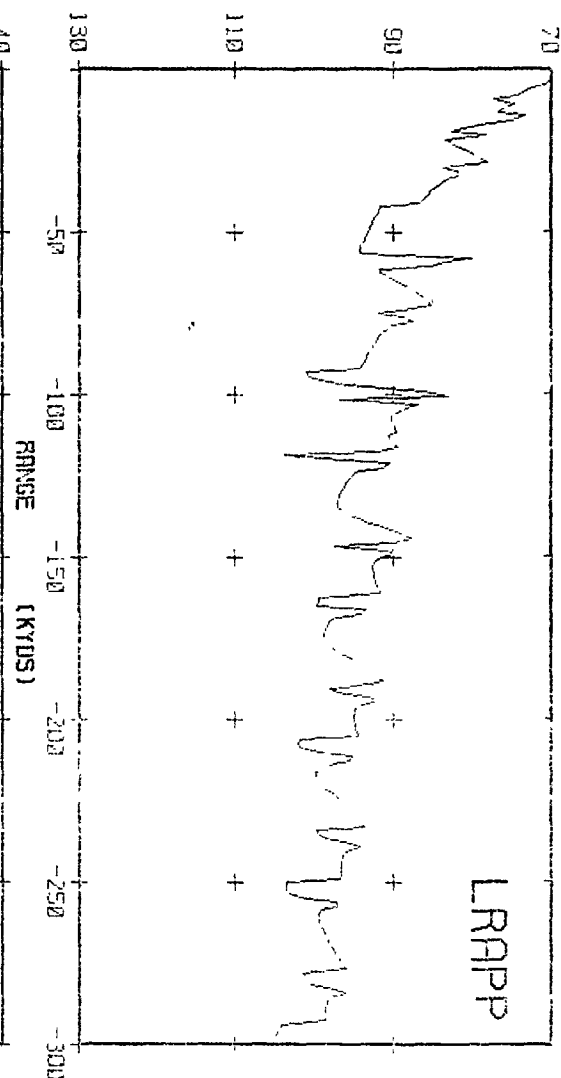


AREA 38 SUMMER

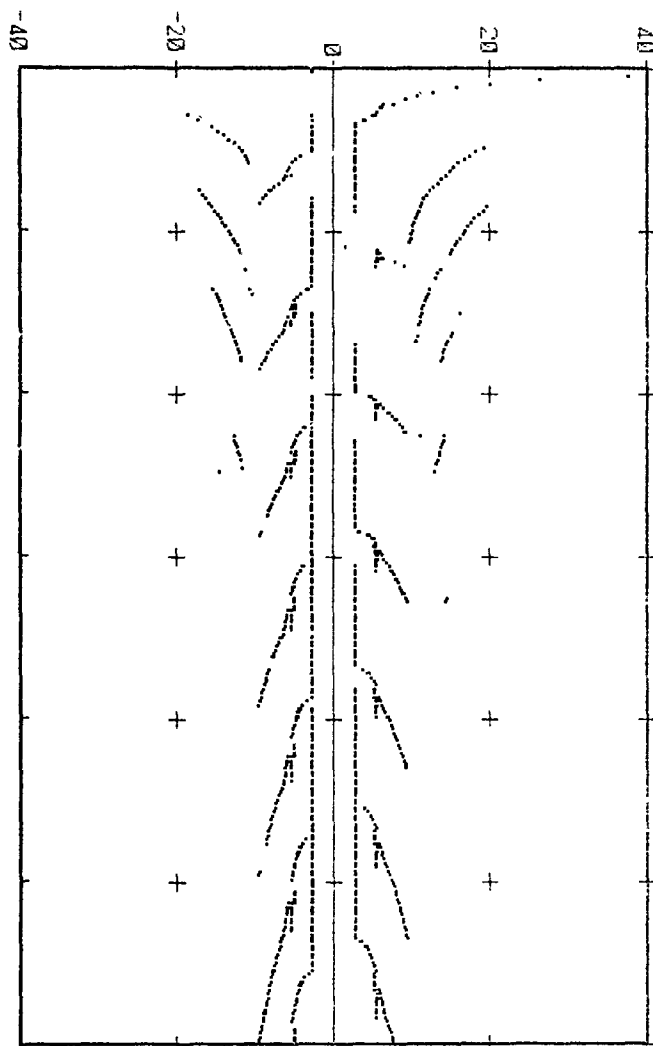
S 50 R 0000 F 600

1450 HRS 1500 1550

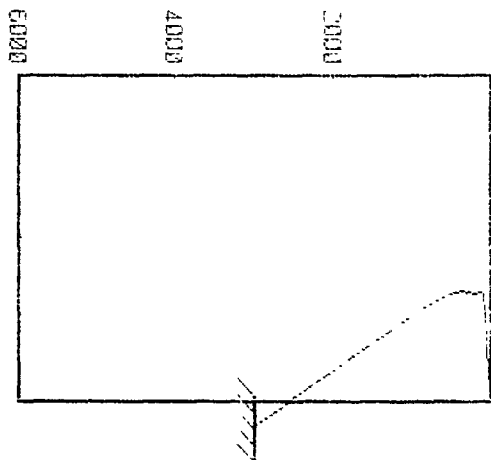
DB LOSS



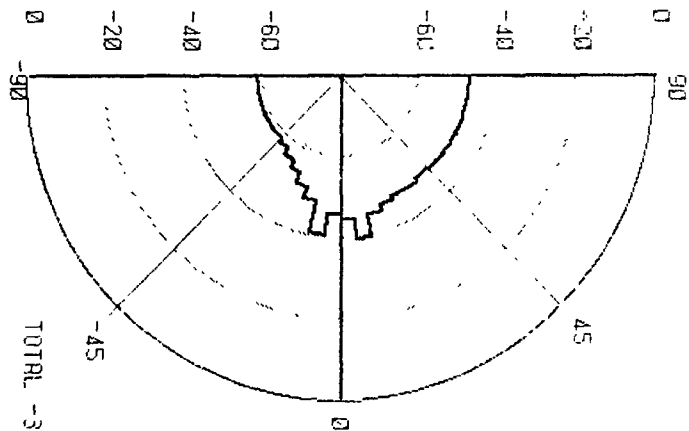
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



TOTRL -35.6 DB

AREA 38 SUMMER

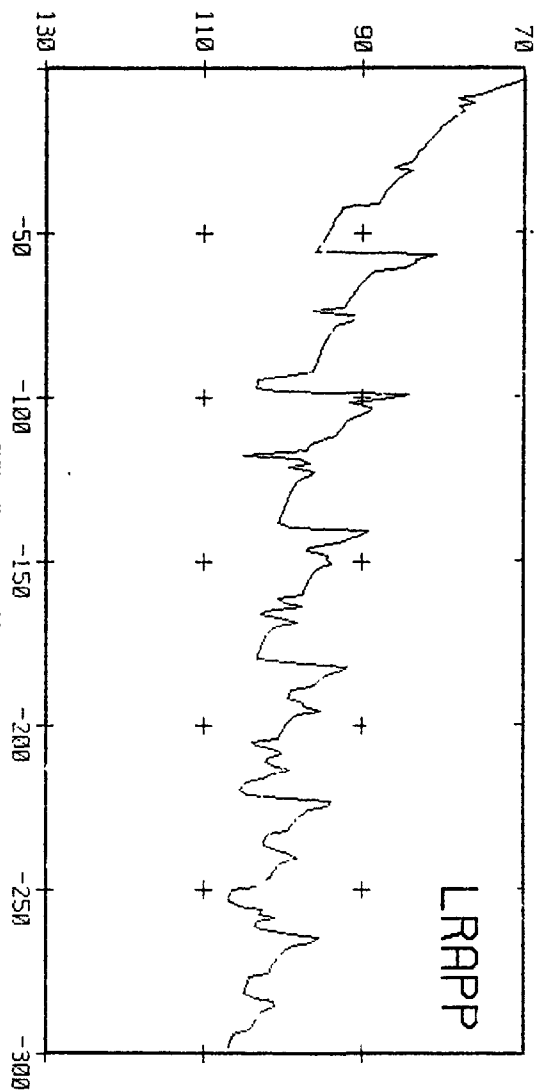
S 233 R 6000 F 600

1450 N/S

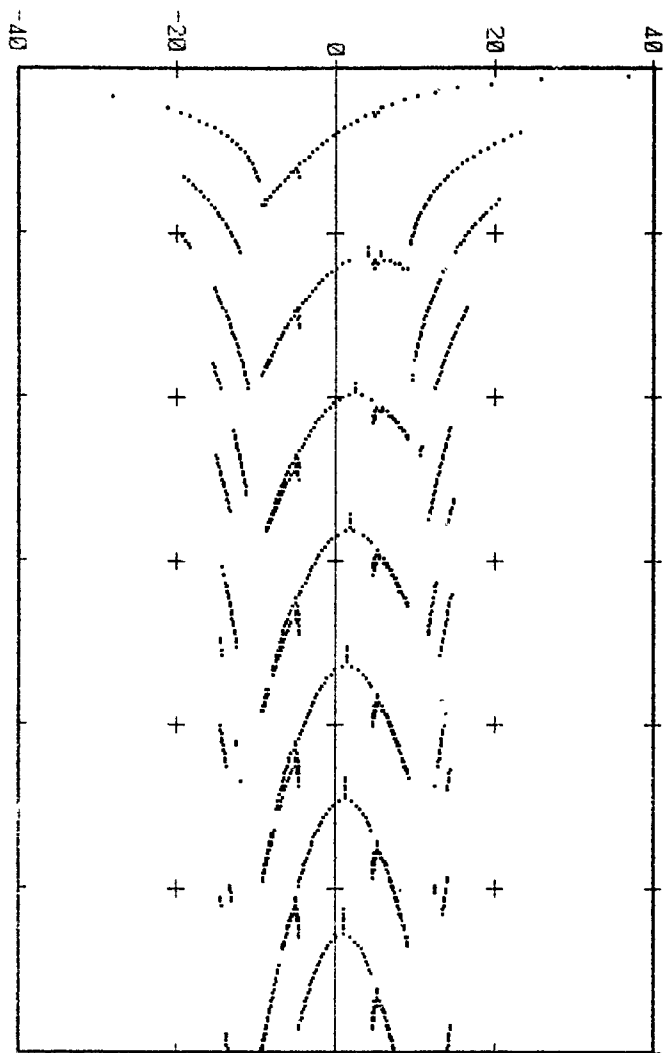
1500

1550

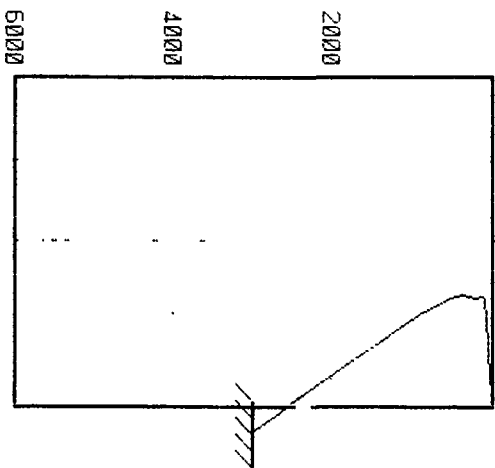
DB LOSS



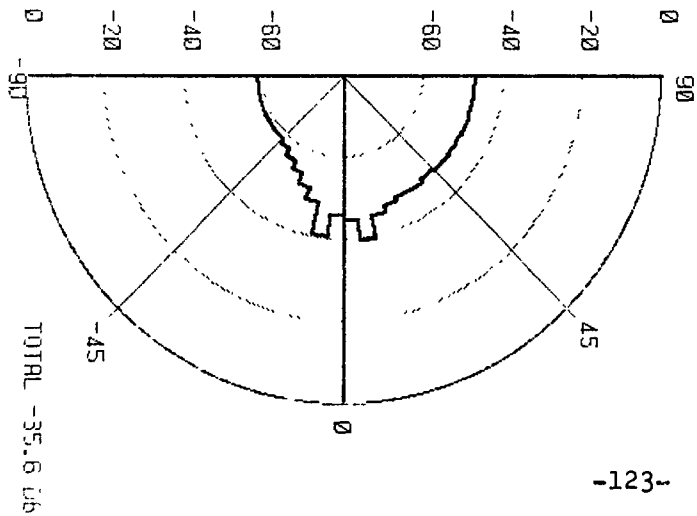
ARRIVAL ANGLE

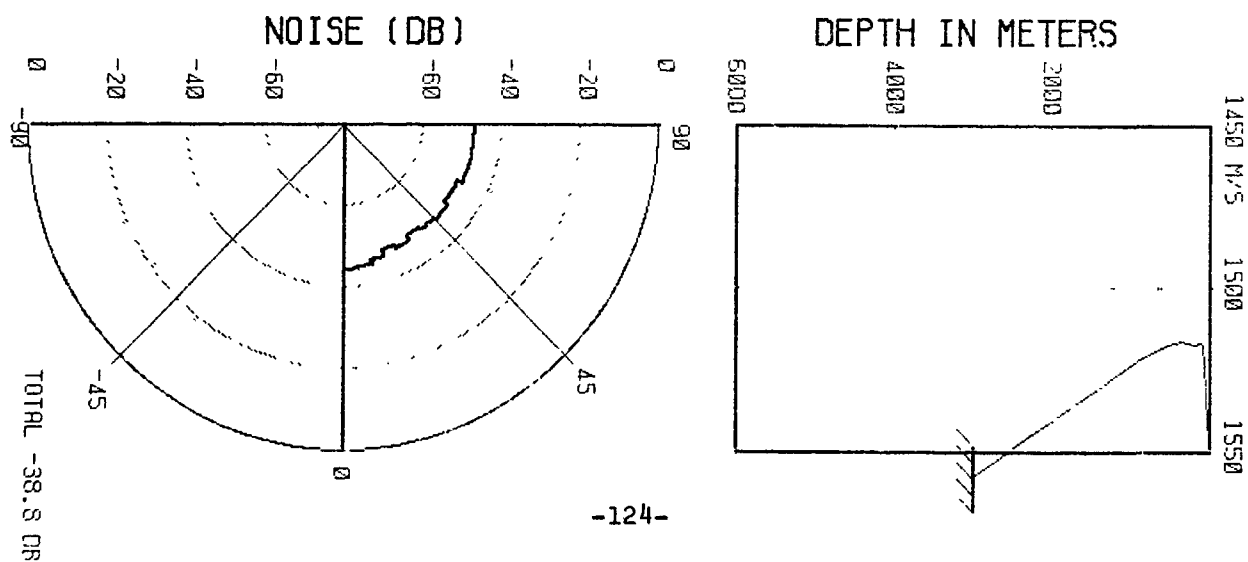
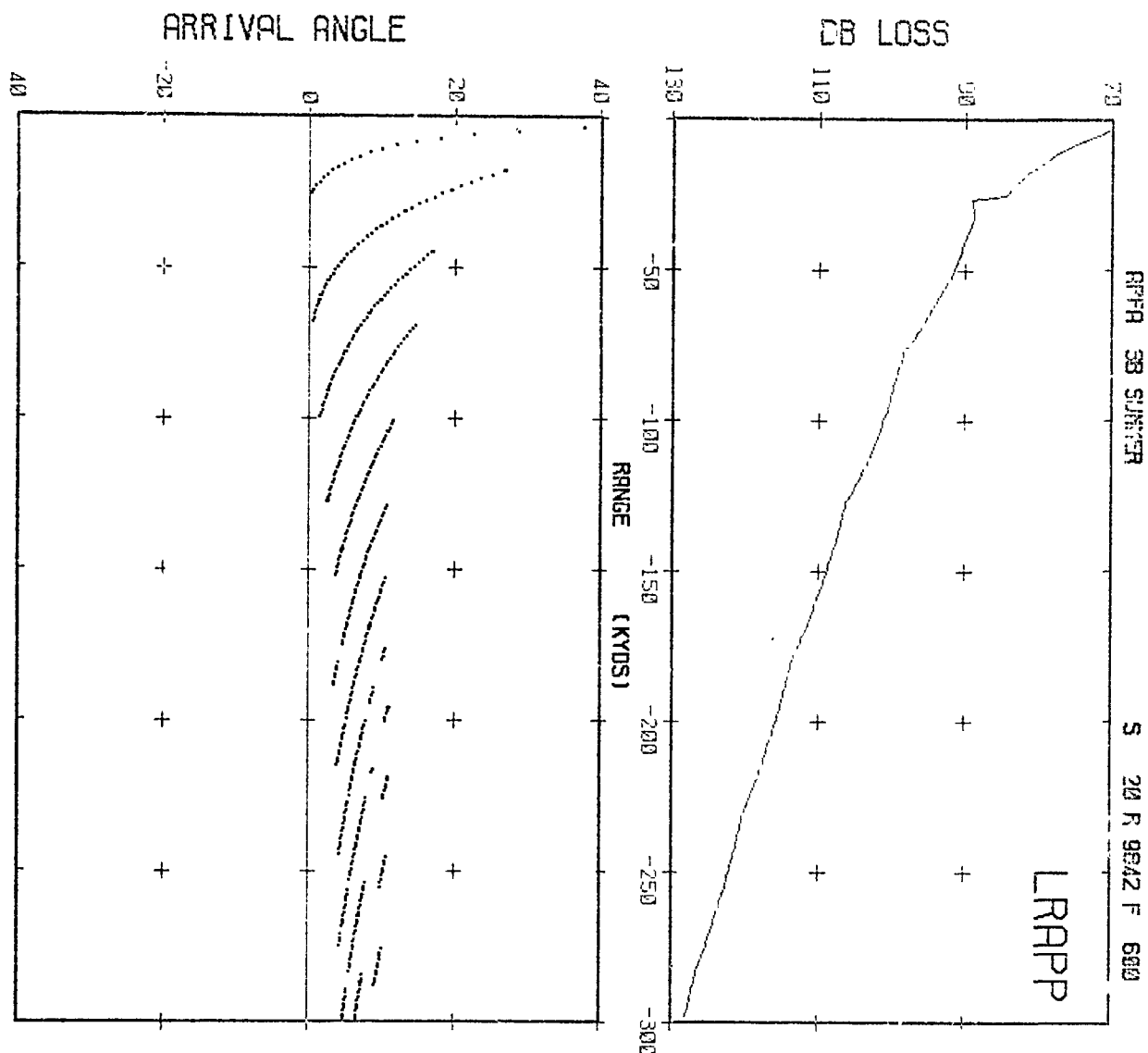


DEPTH IN METERS



NOISE (DB)





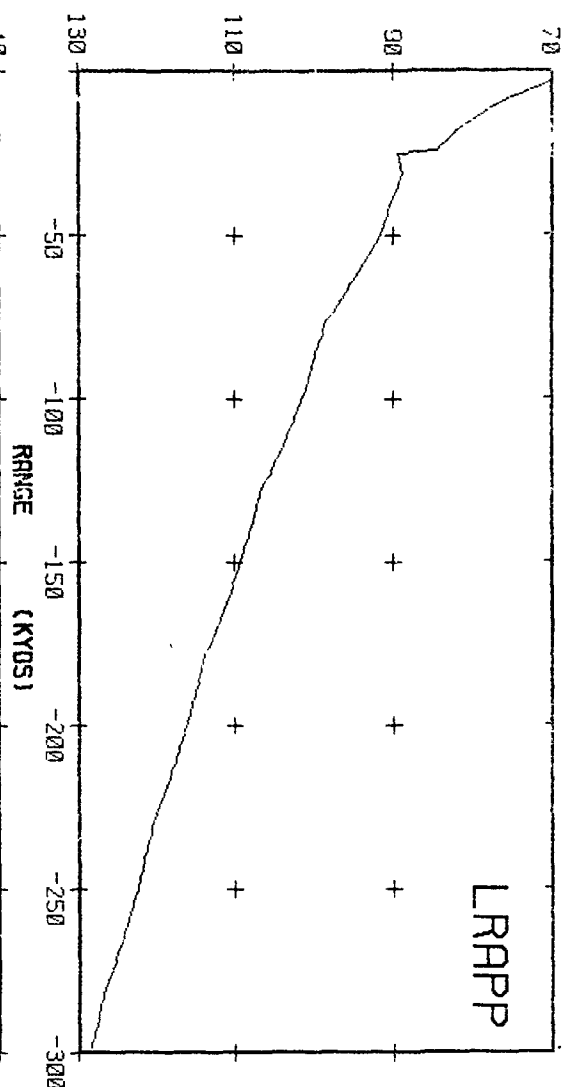
AREA 38 SUMMER

S 50 R 9842 F 600

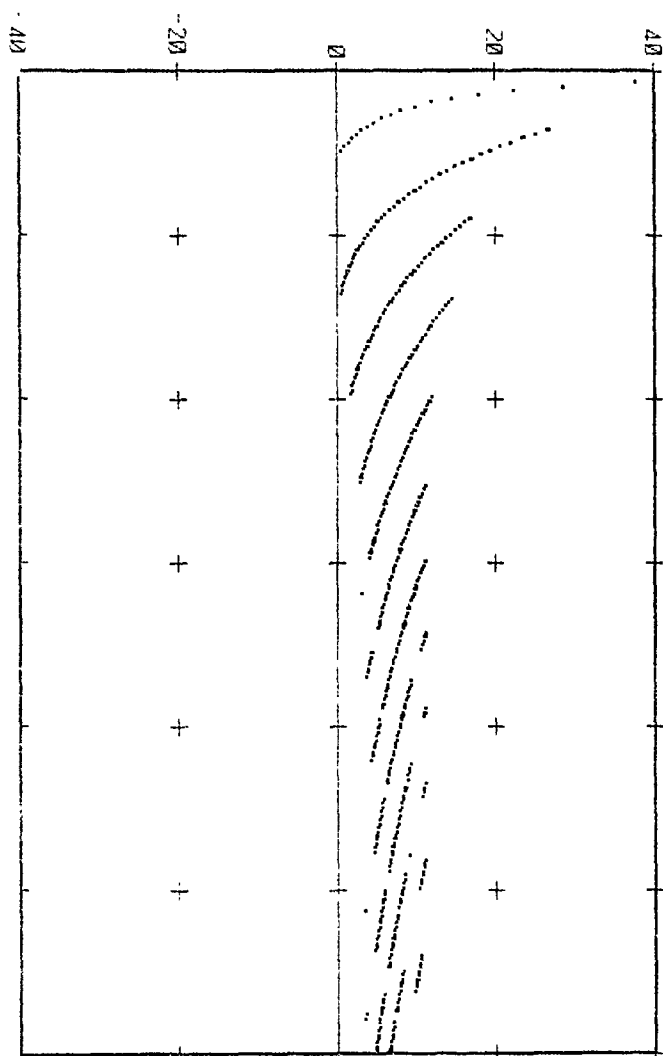
1450 M/S 1500

1550

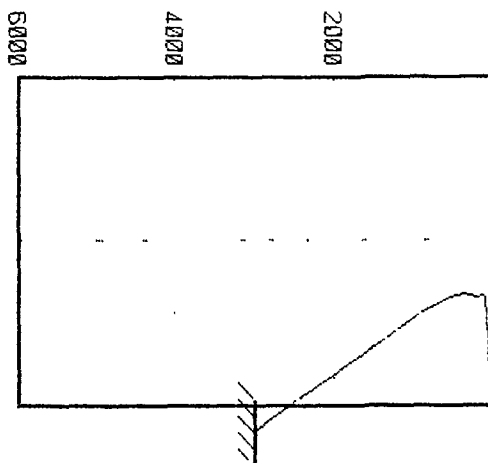
DB LOSS



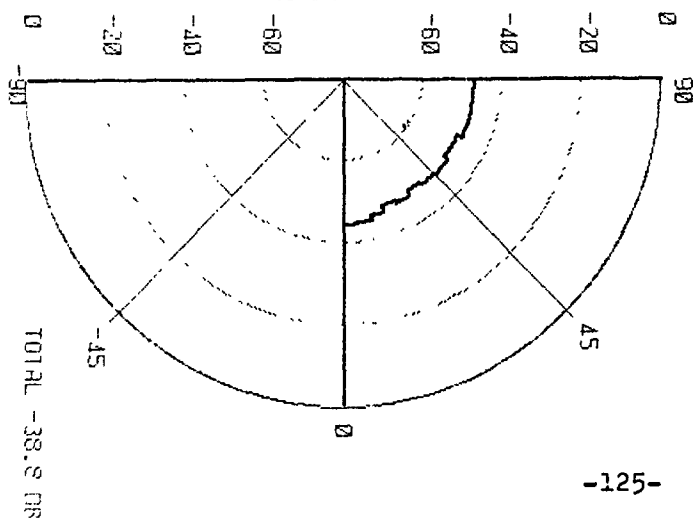
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)





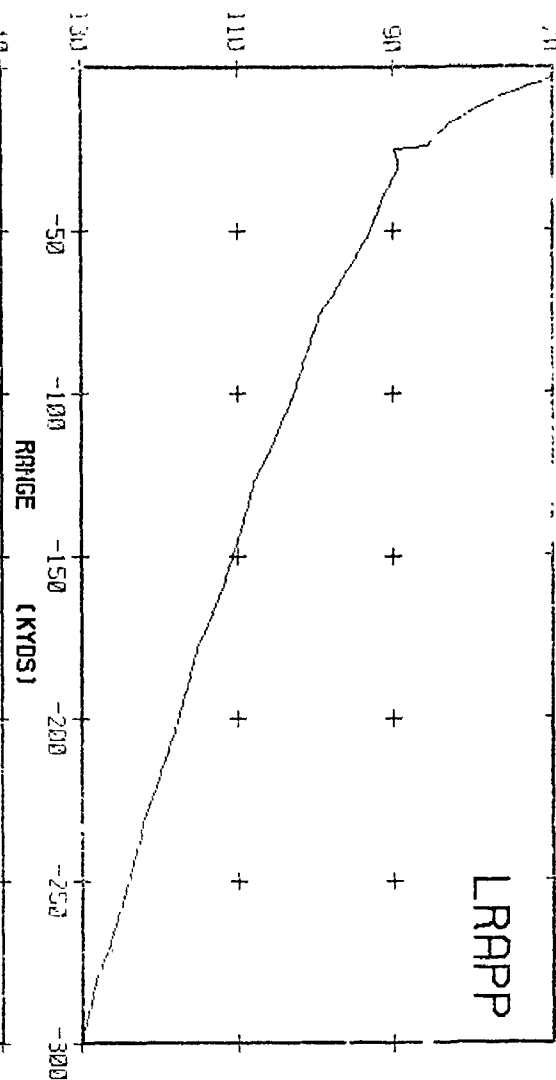
FROM 33 SURFER

S 233 R 9842 F 600

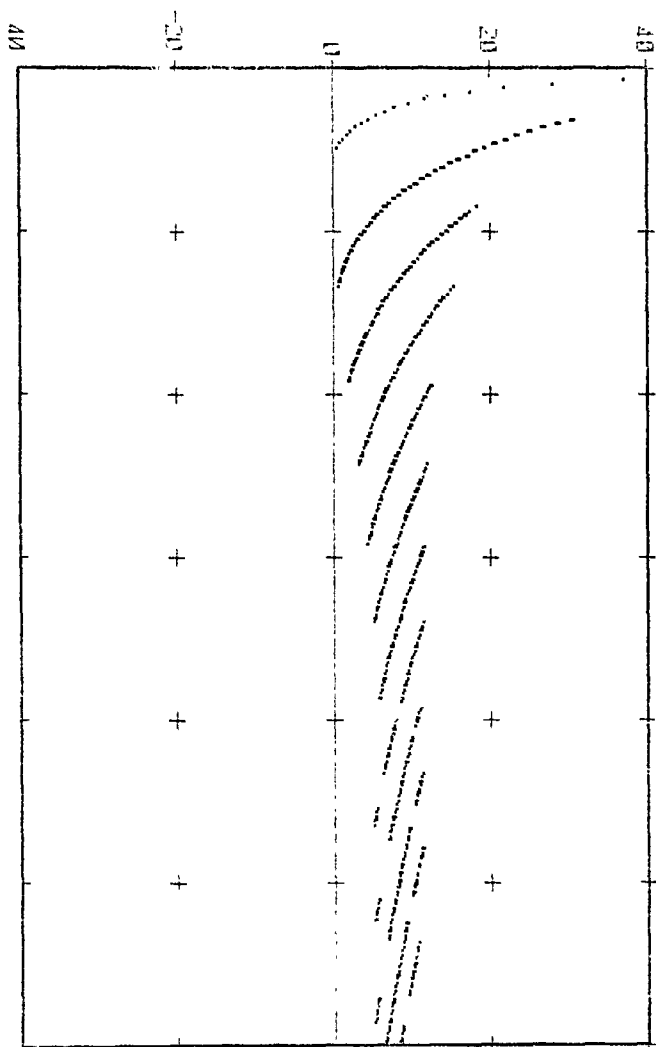
1450 M/S 1500

1550

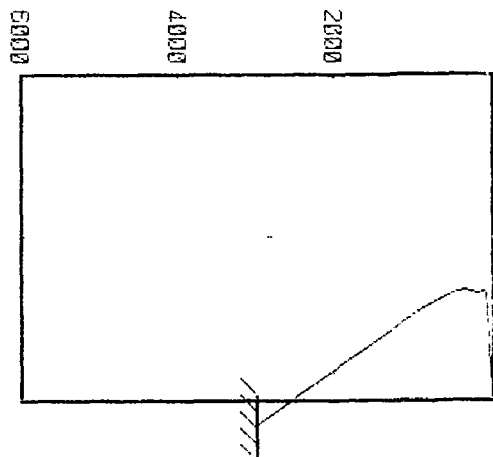
DB LOSS



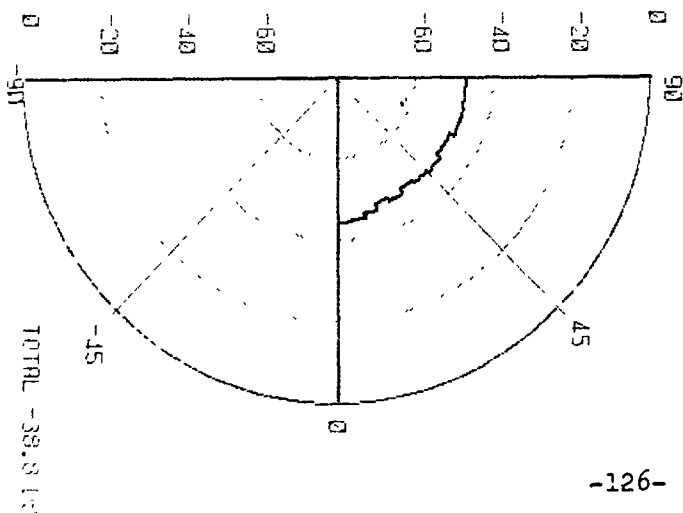
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

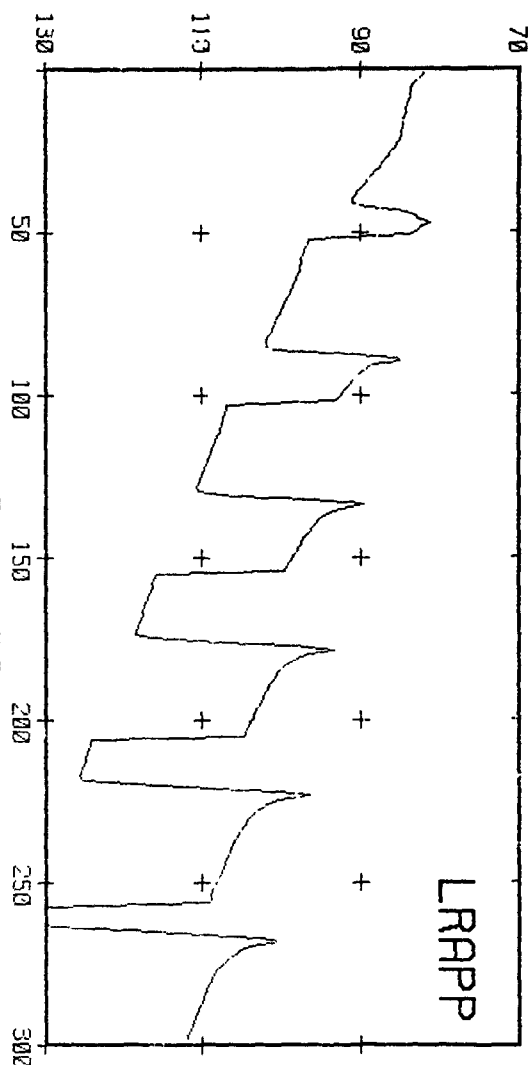


RIVER 38 SUMMER

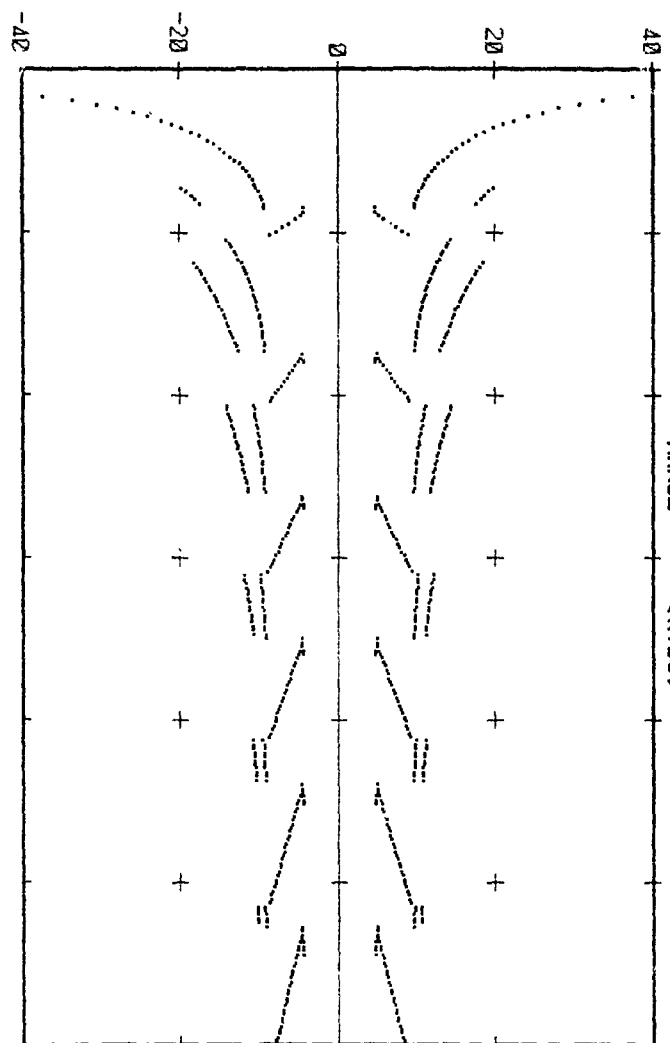
S 20 R 60 F 900

LRAPP

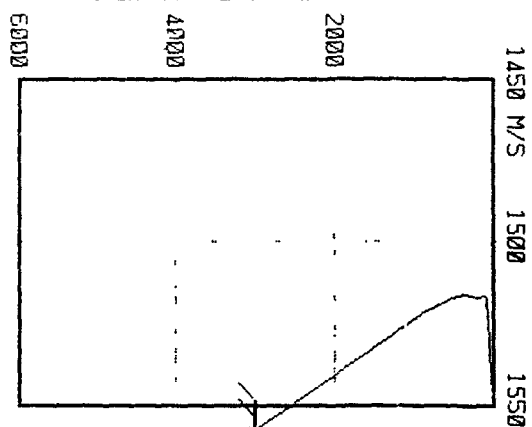
DB LOSS



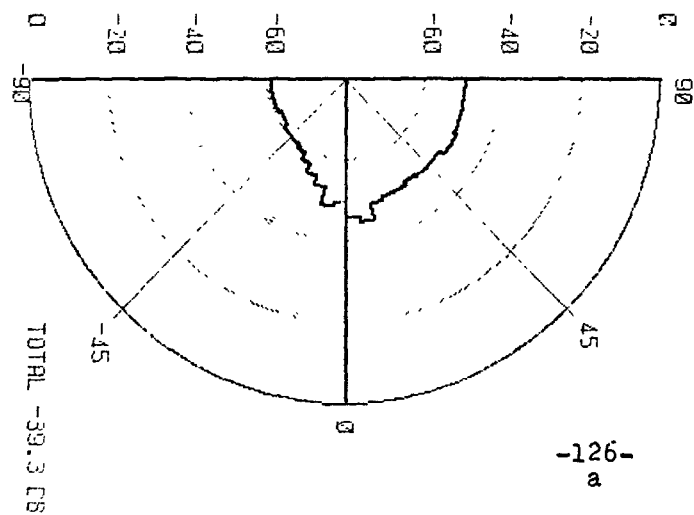
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

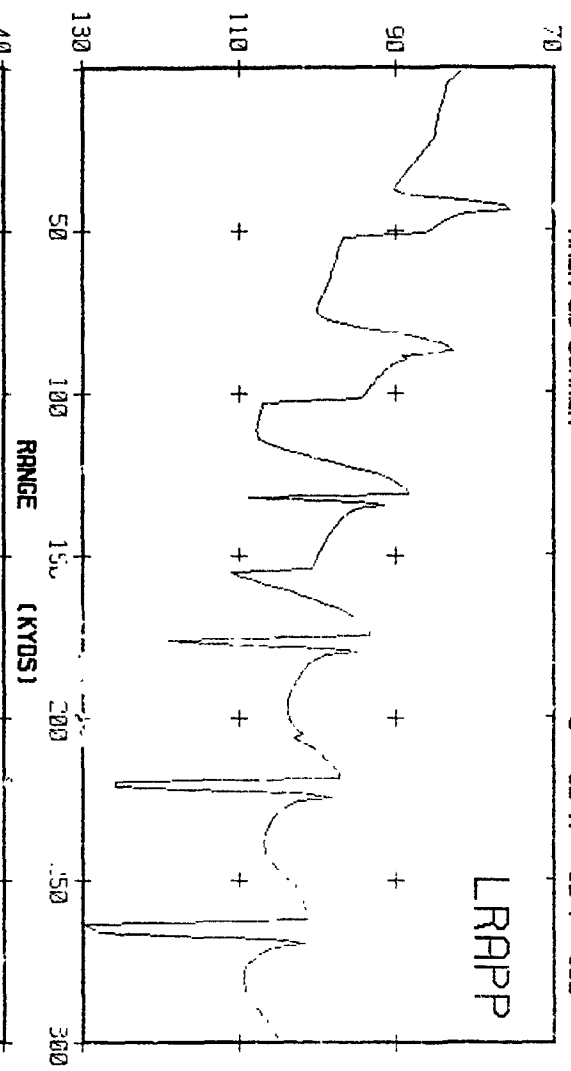


AREA 313 SUMNER

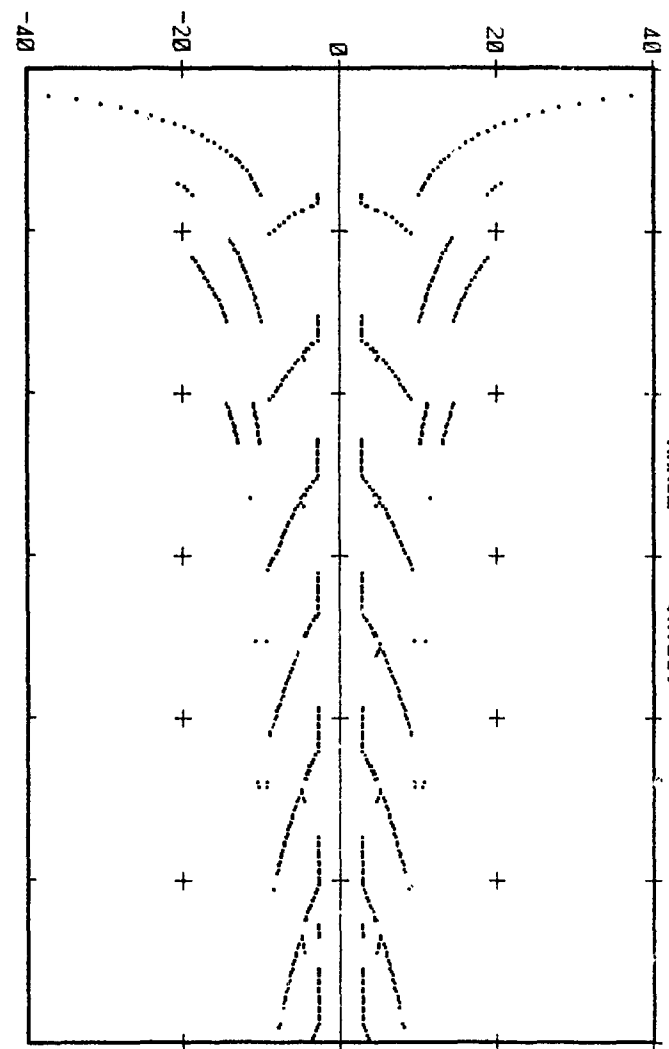
S 50 R 60 F 900

1450 11:5 1500 1550

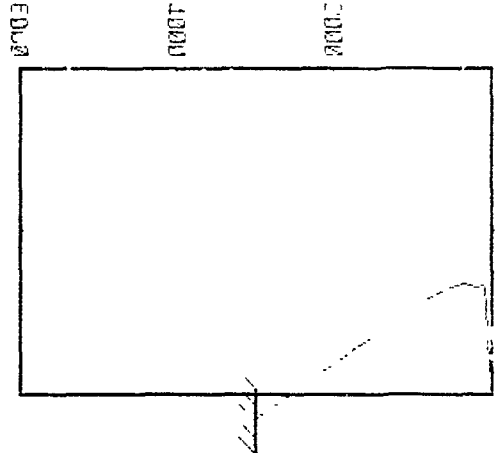
DB LOSS



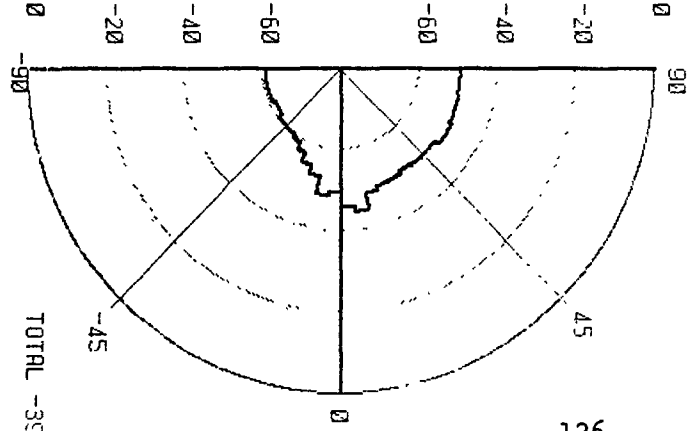
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

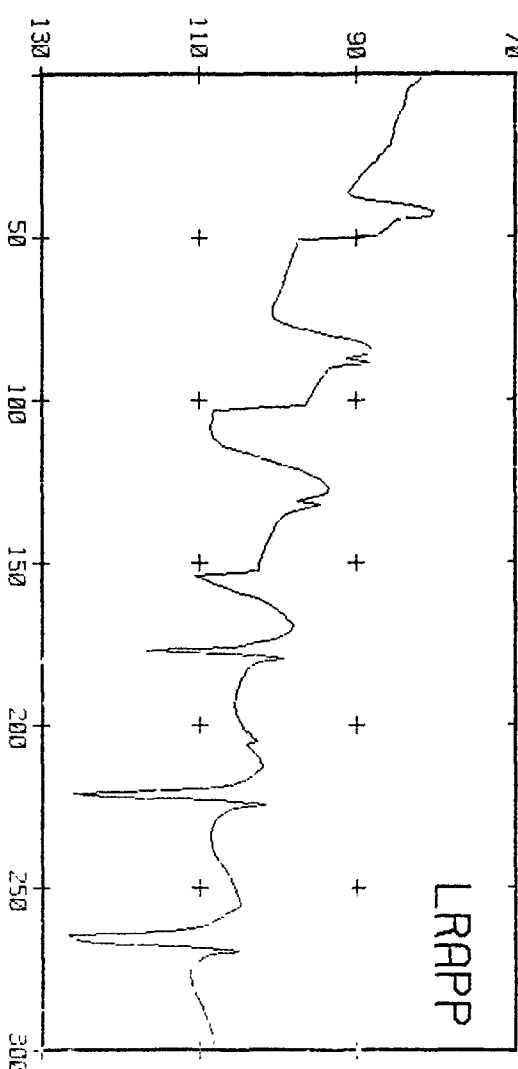


ARRR 3B SUMMER

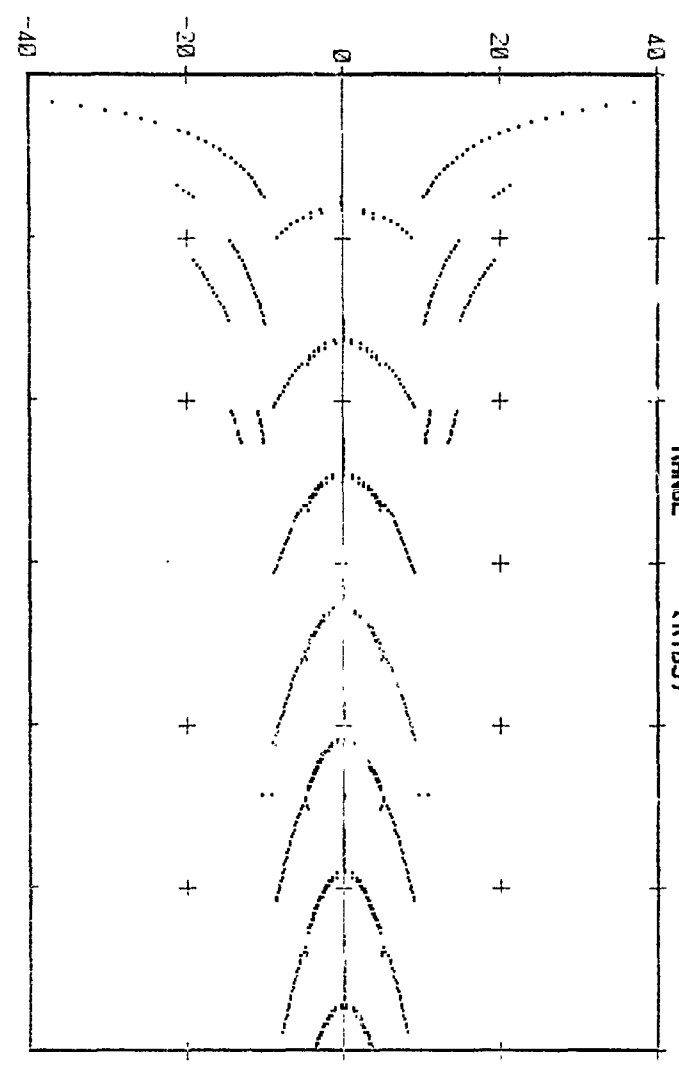
S 233 R 60 F 900

1450 M/S 1500 1550

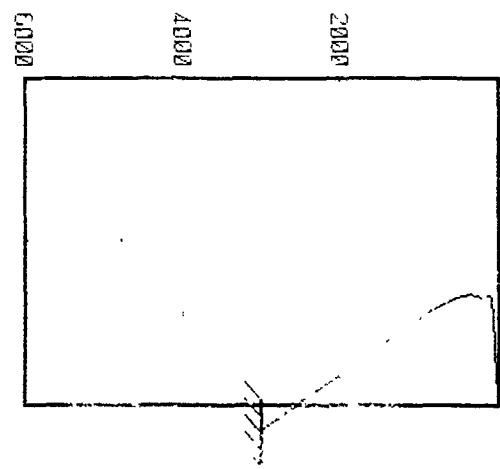
DB LOSS



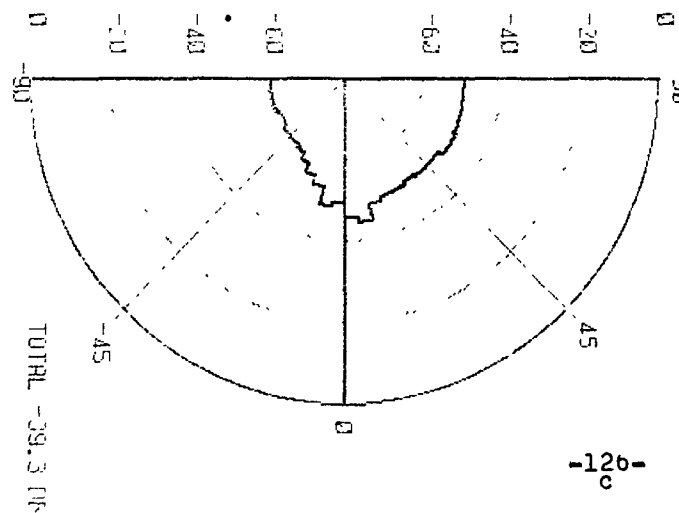
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



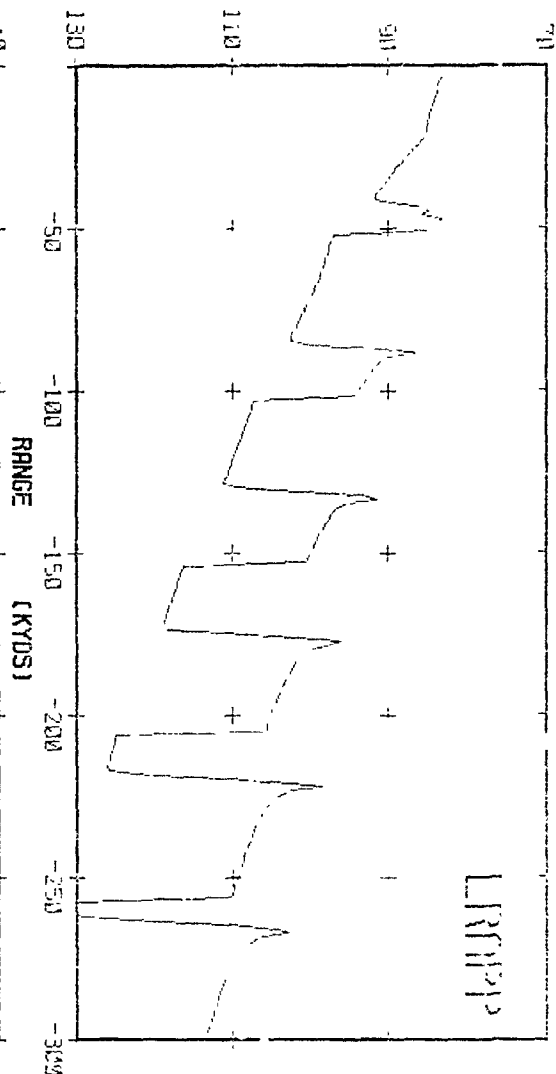
FINER 3B SUMMER

S 20 R 133 F 520

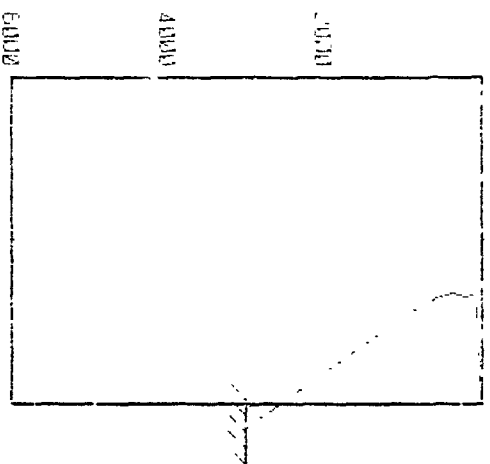
1400 1450 1500

1550

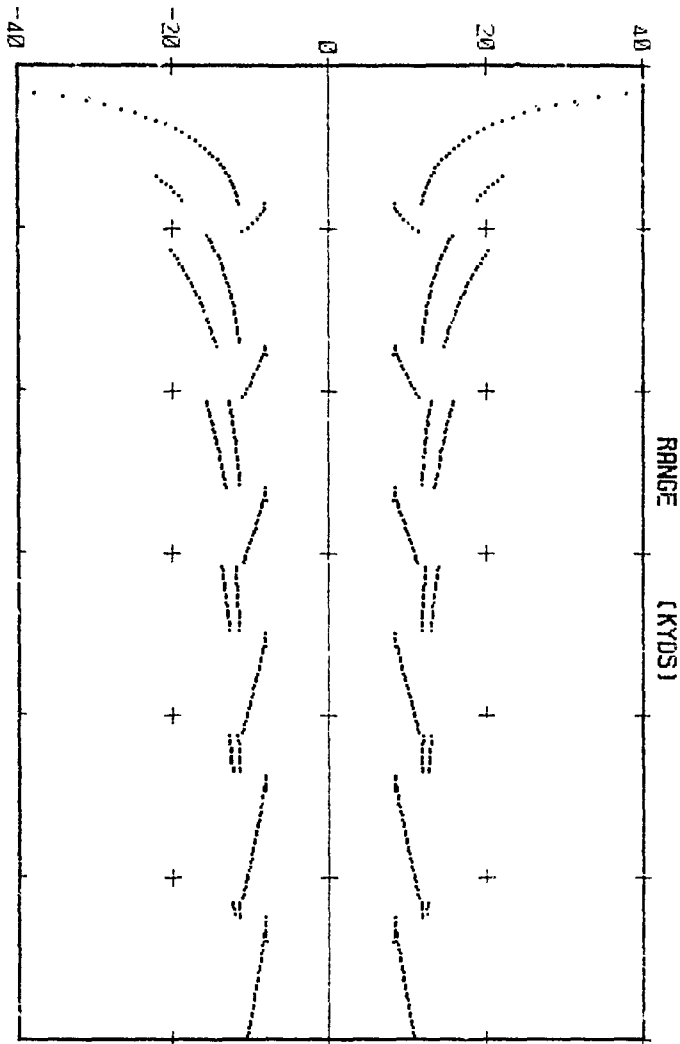
DB LOSS



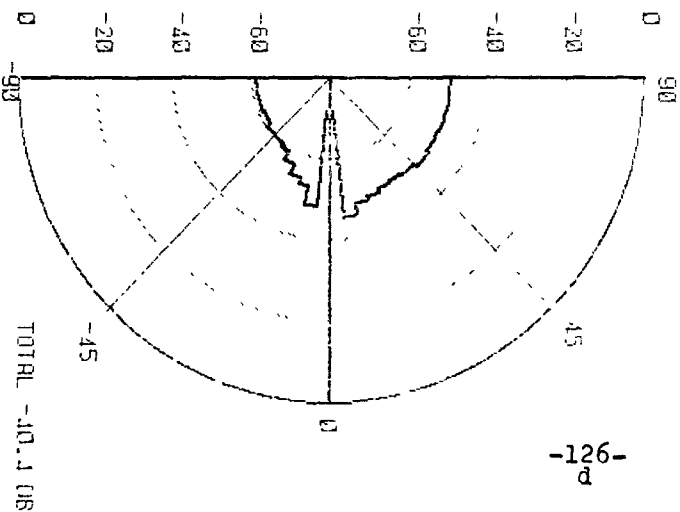
DEPTH IN METERS



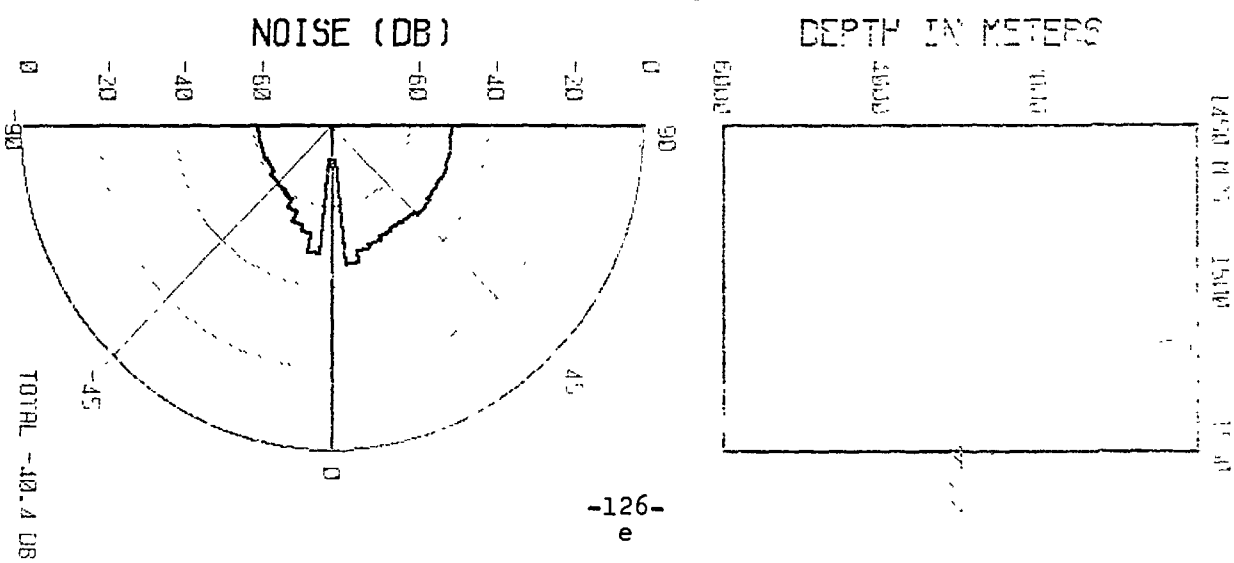
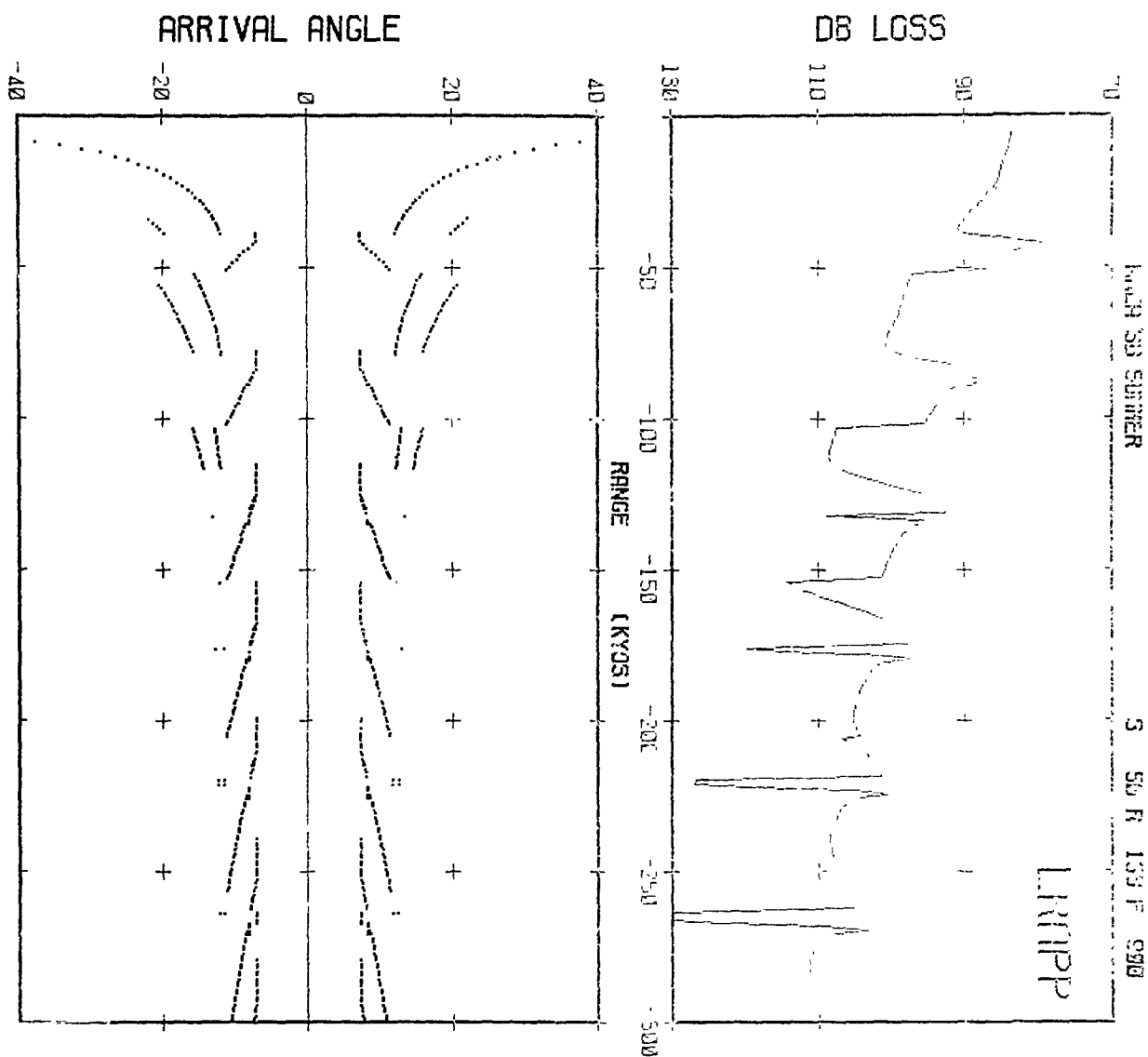
ARRIVAL ANGLE



NOISE (DB)



-126-

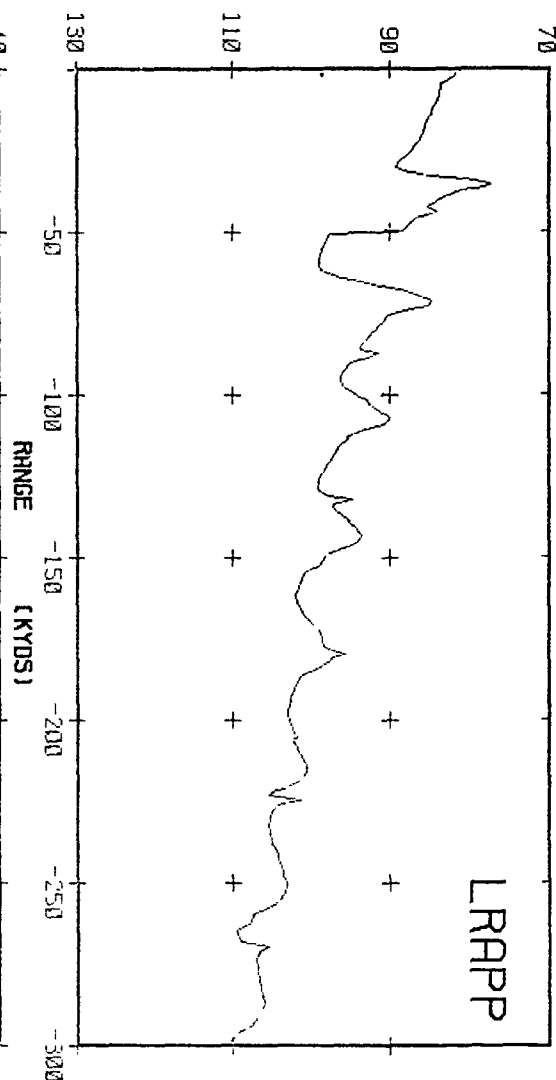


AREA 3B SUMMER

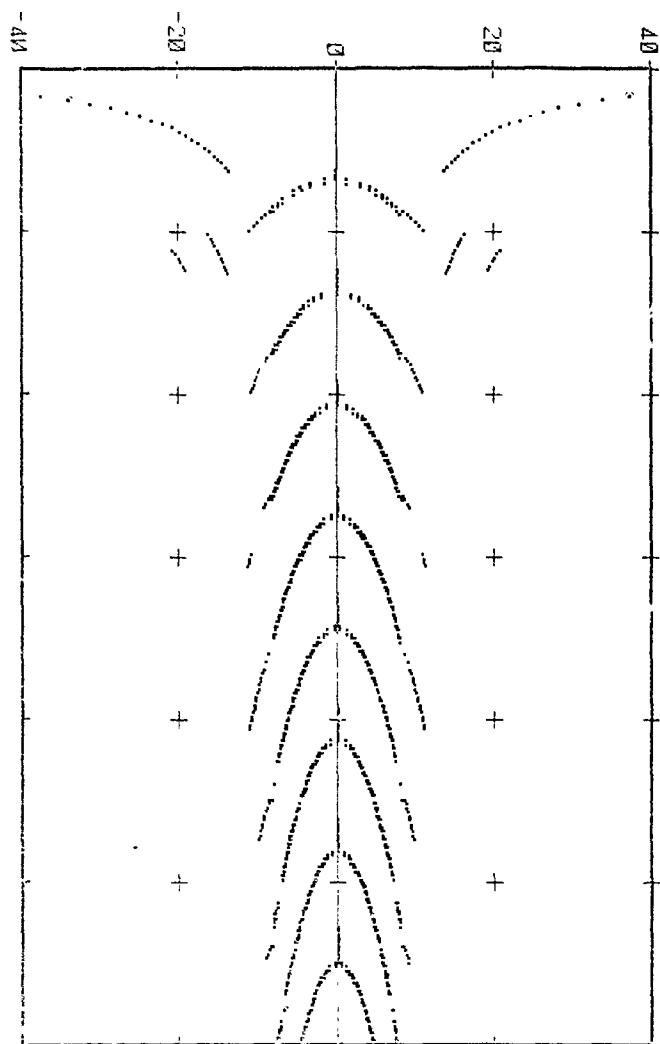
S 233 R 133 F 900

1450 M/S 1500 1550

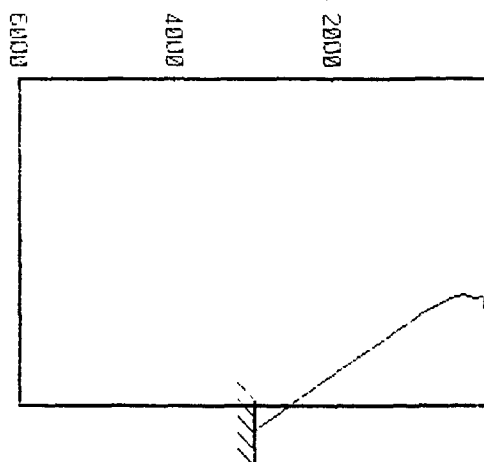
DB LOSS



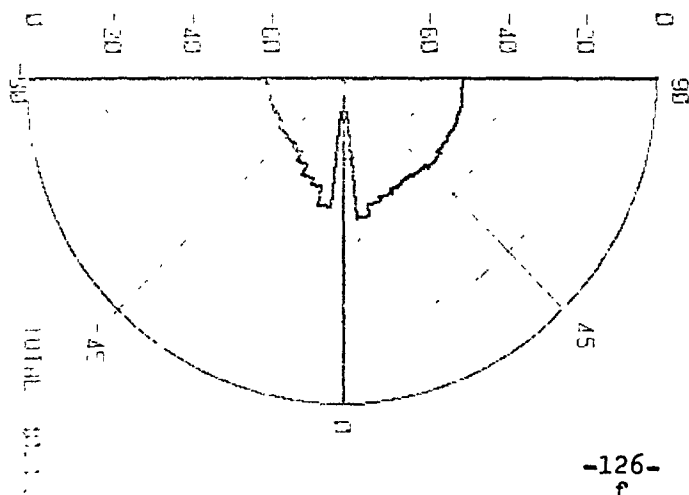
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

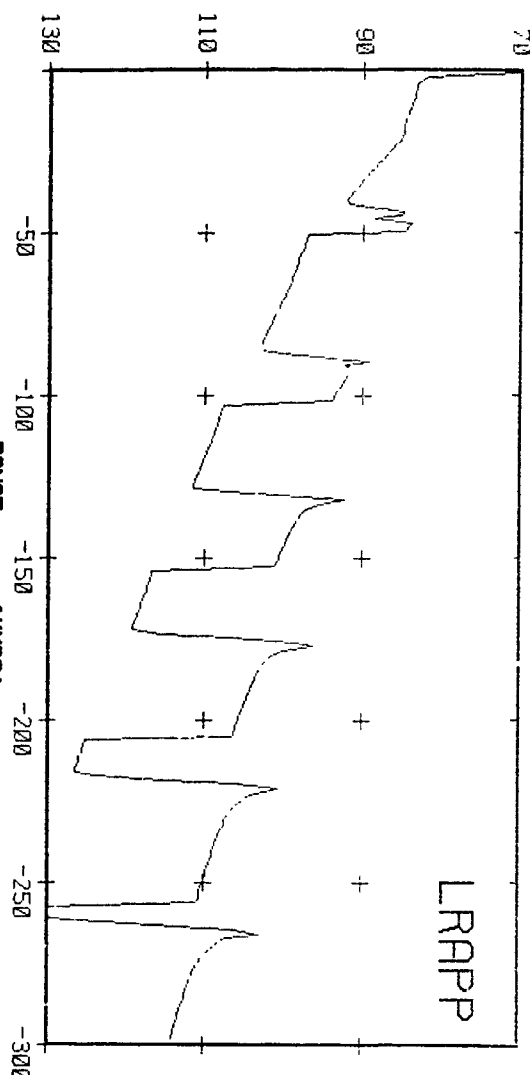


AREA 3B SUMMER

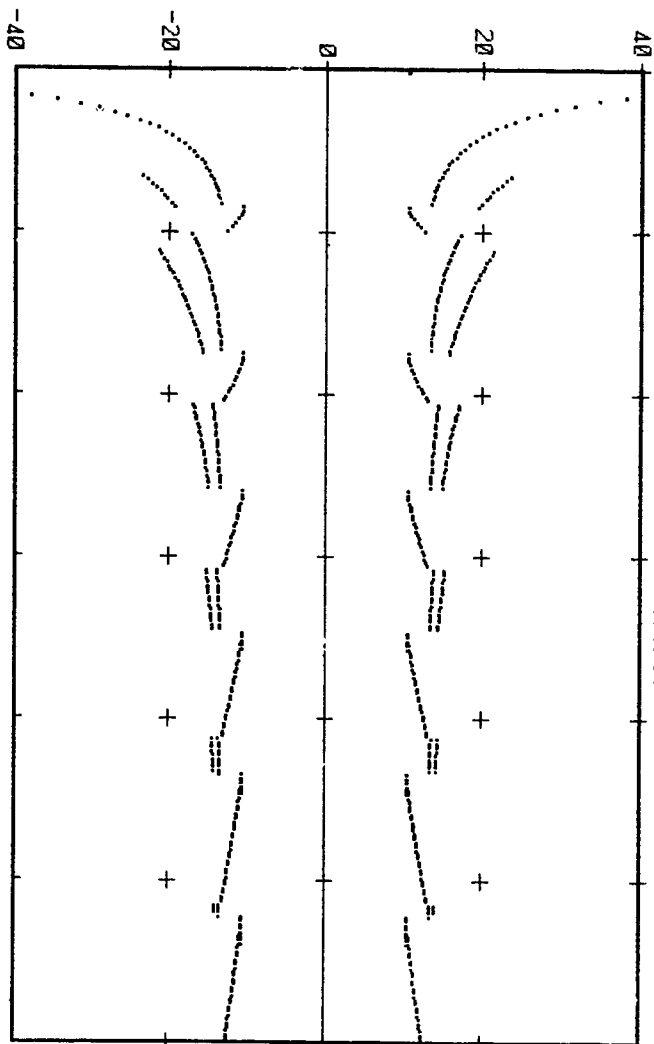
S 20 R 300 F 980

1450 M/S 1500 1550

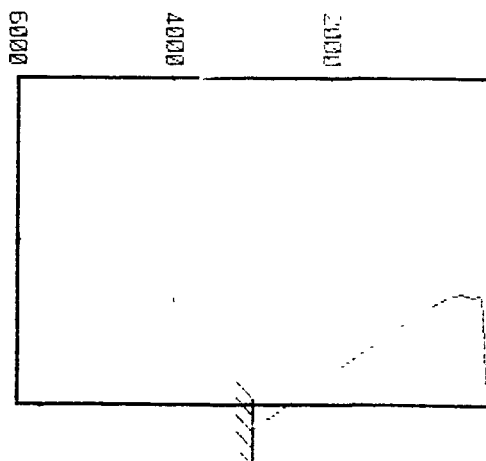
DB LOSS



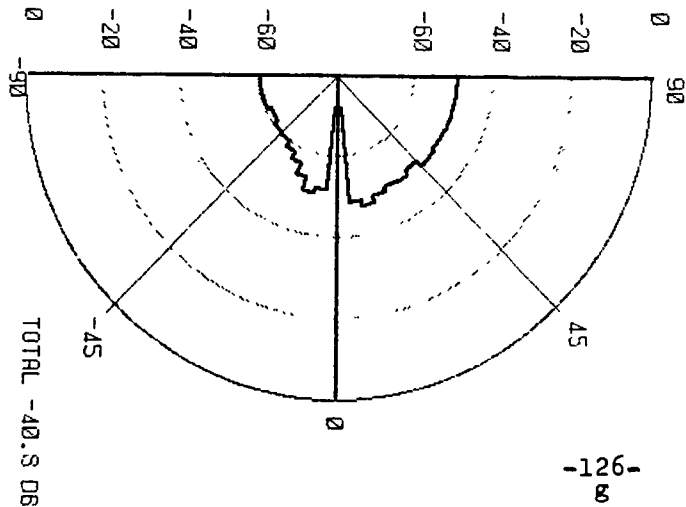
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



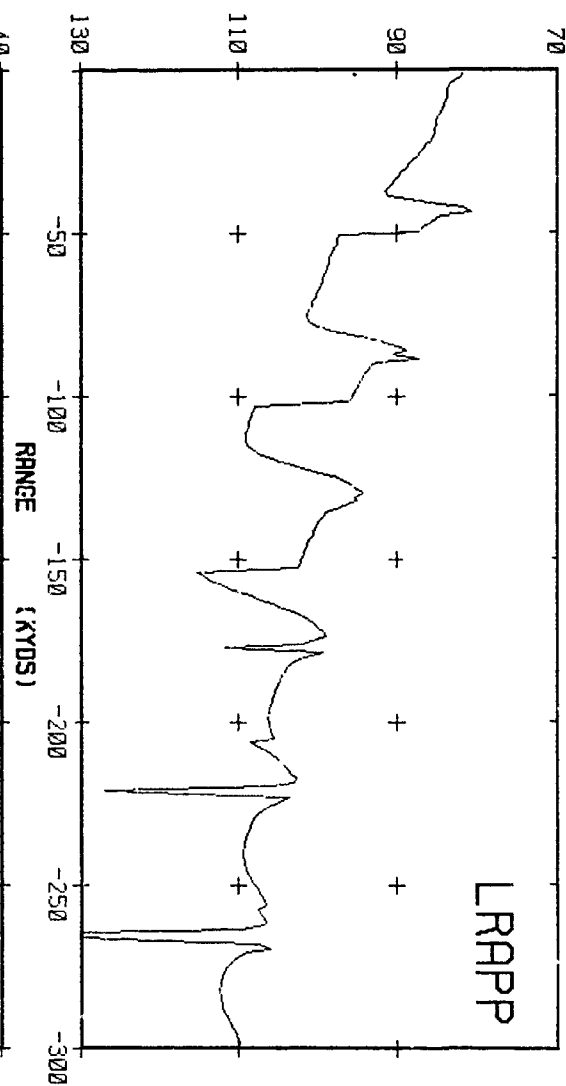


AREA 3B SUMMER

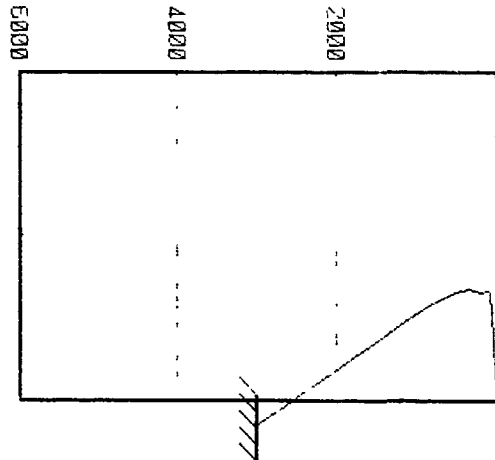
S 50 R 300 F 900

1450 M/S 1500 1550

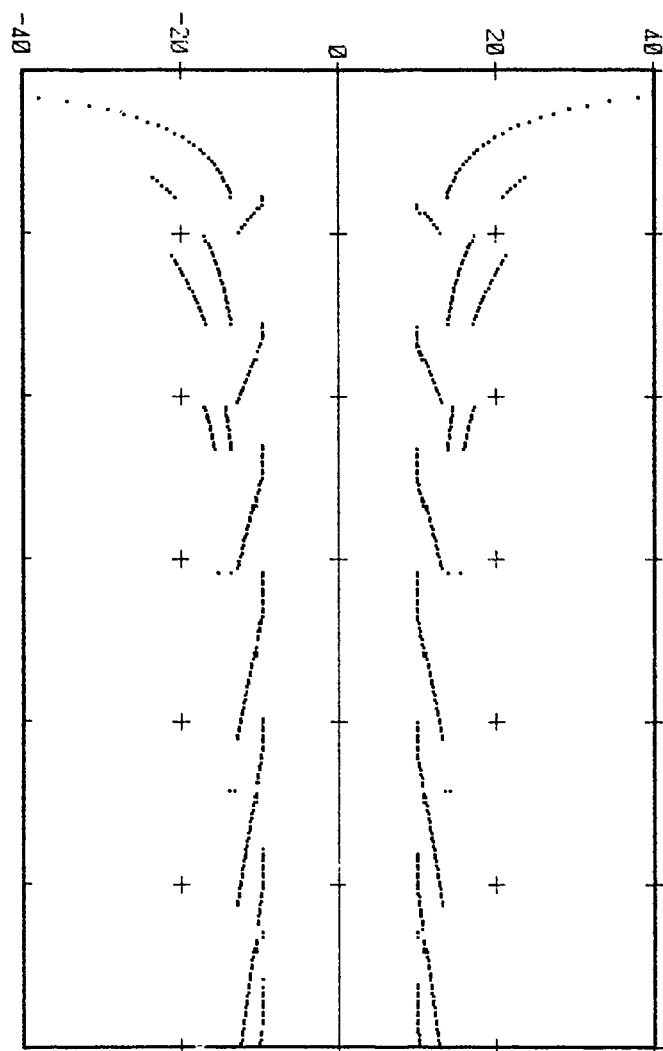
DB LOSS



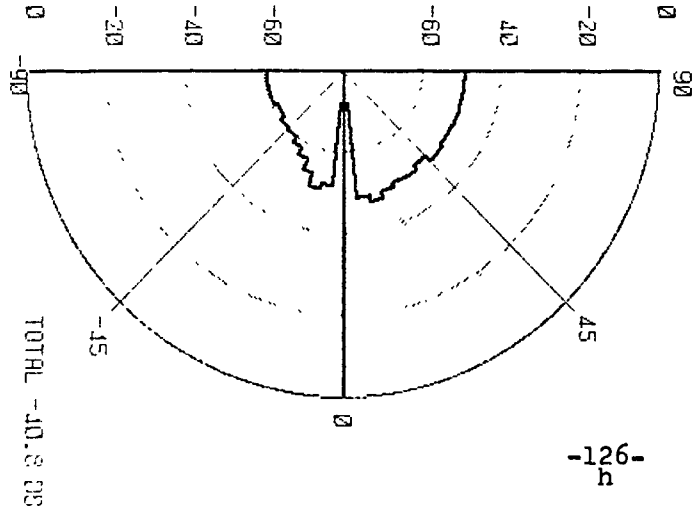
DEPTH IN METERS



ARRIVAL ANGLE



NOISE (DB)

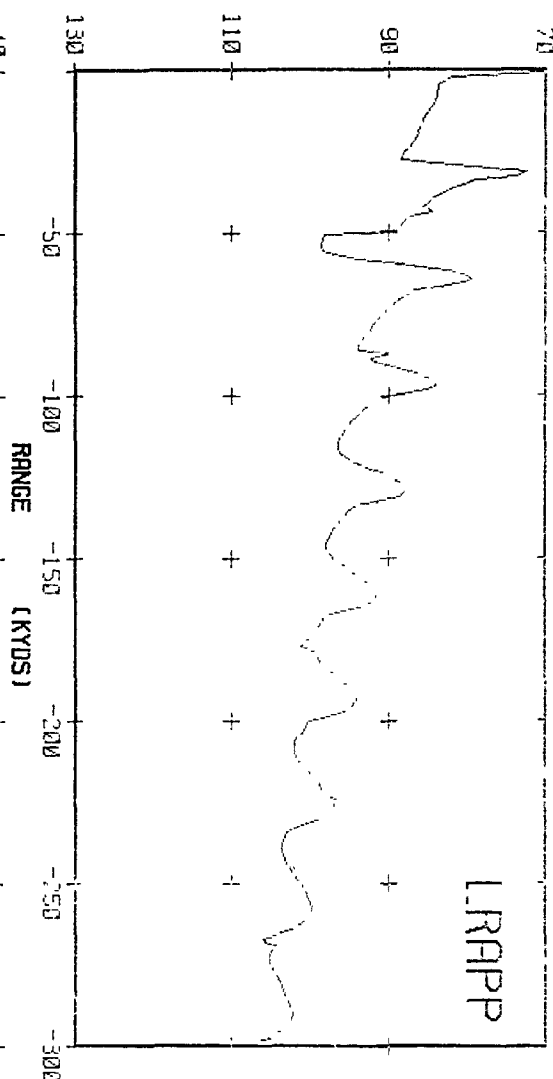


ARER 33 SUMMER

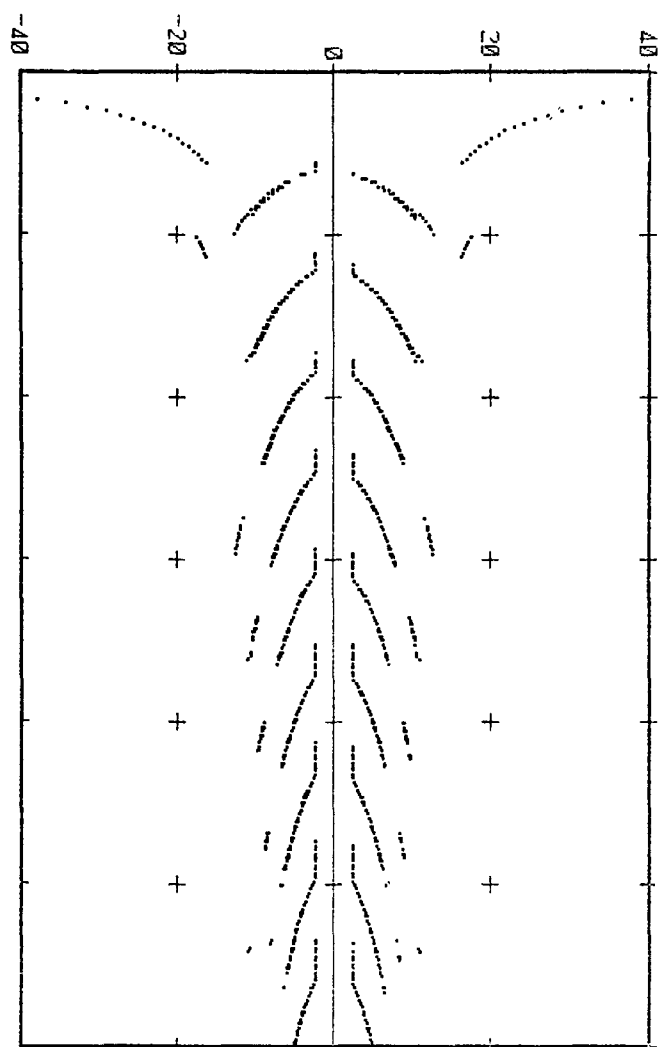
S 233 R 31.0 F 970

1450 11.5 1500 1500

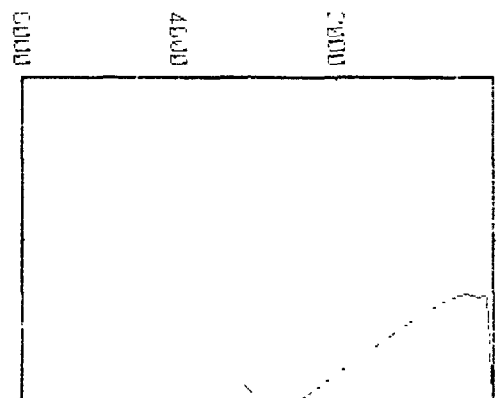
DB LOSS



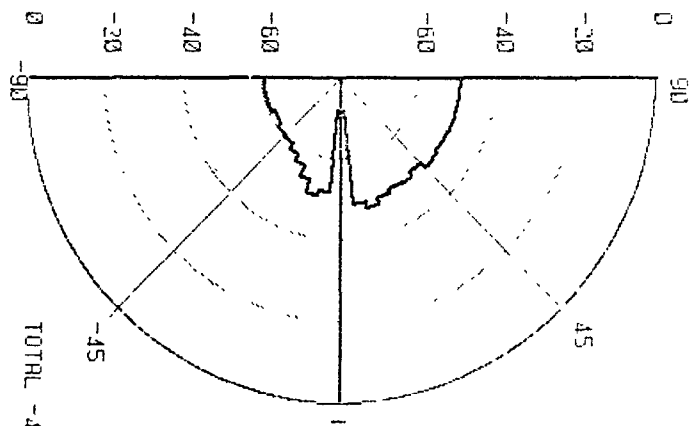
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



TOTAL -40.8 DB

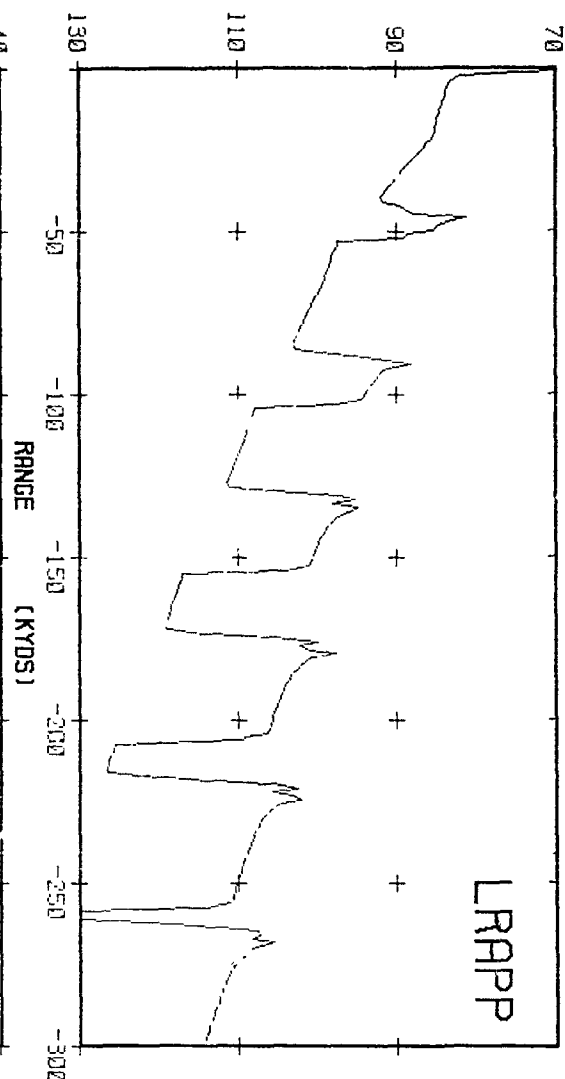
-126-  
1

AREA 3B SUMNER

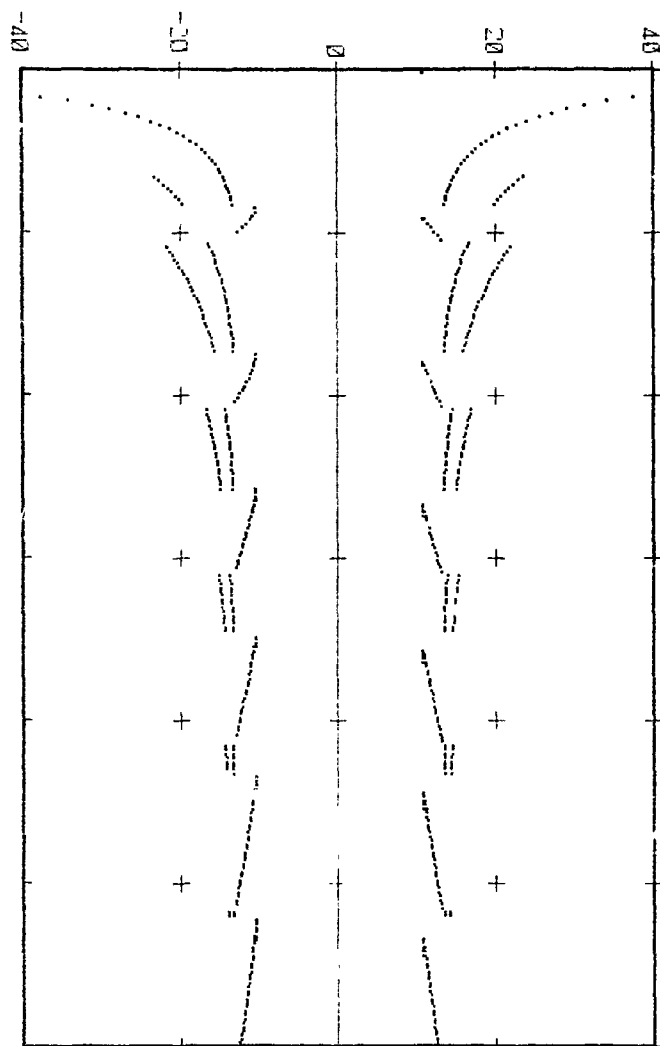
S 23 R 600 F 900

1450 M/S 1500 1550

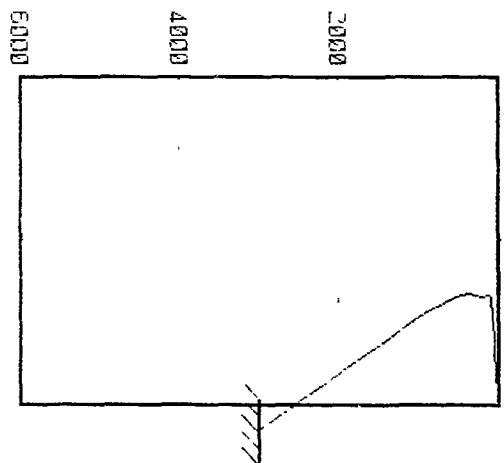
DB LOSS



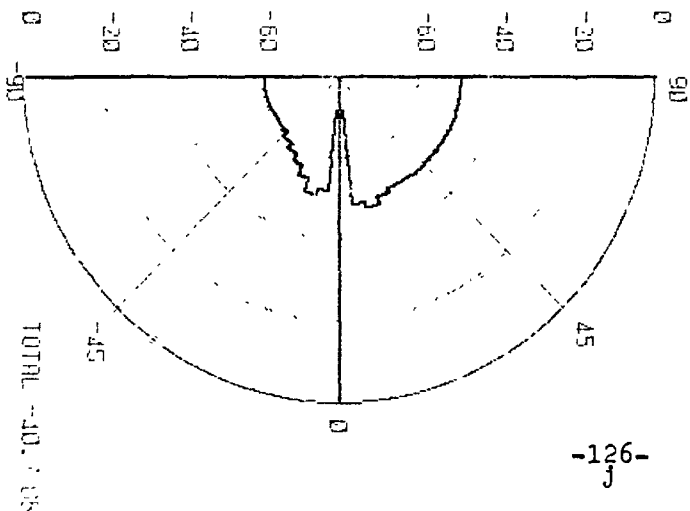
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

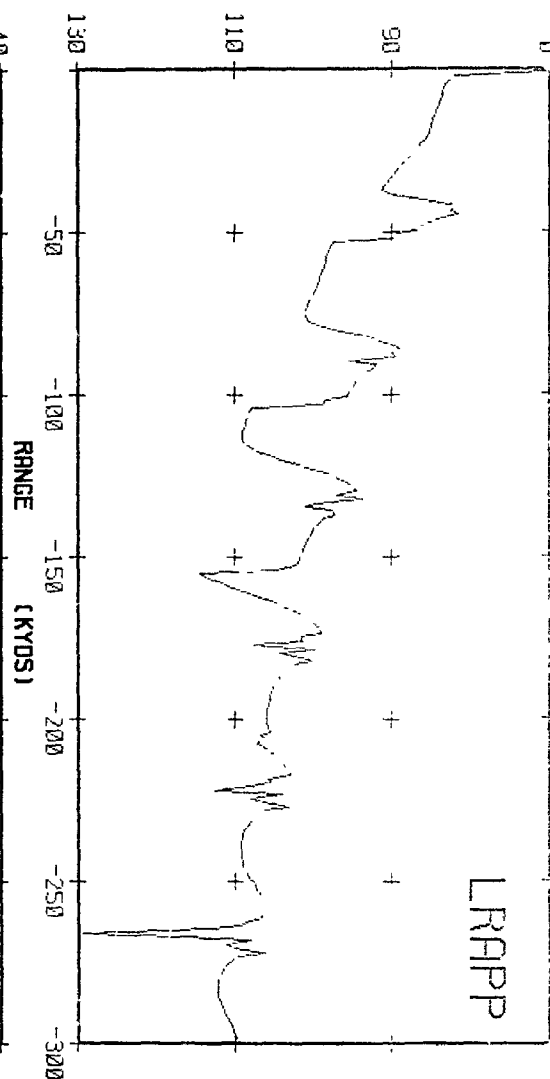


AREA 3B SUMMER

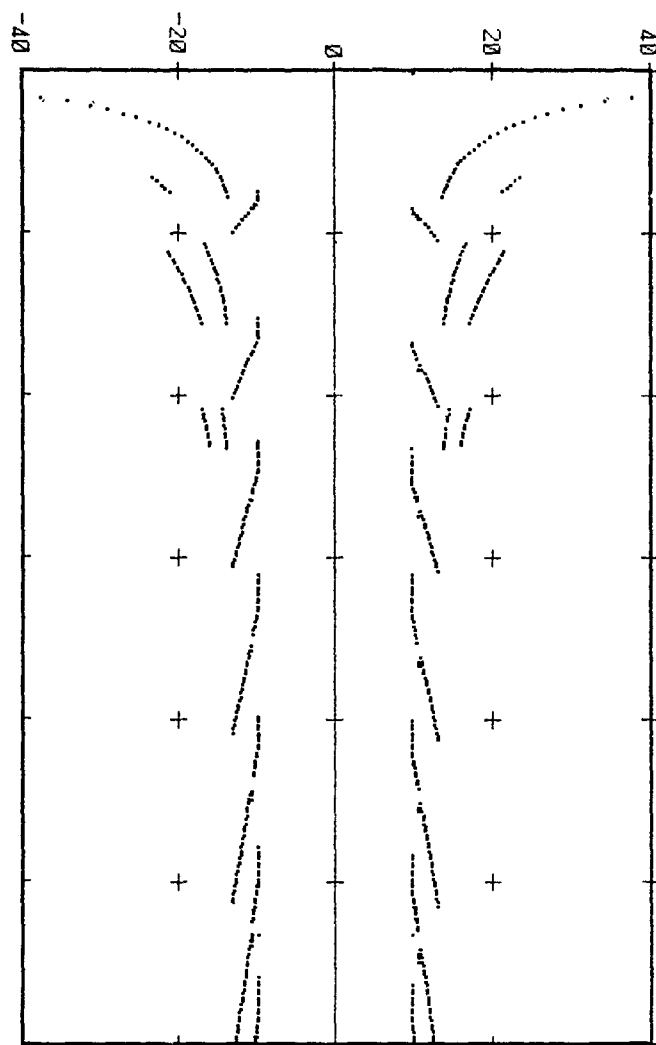
S 50 R 602 F 900

1450 1455 1500 1550

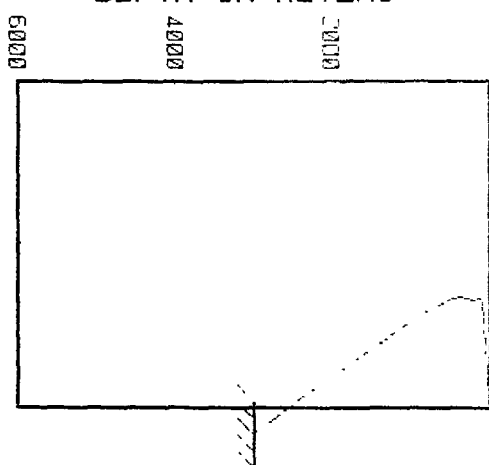
DB LOSS



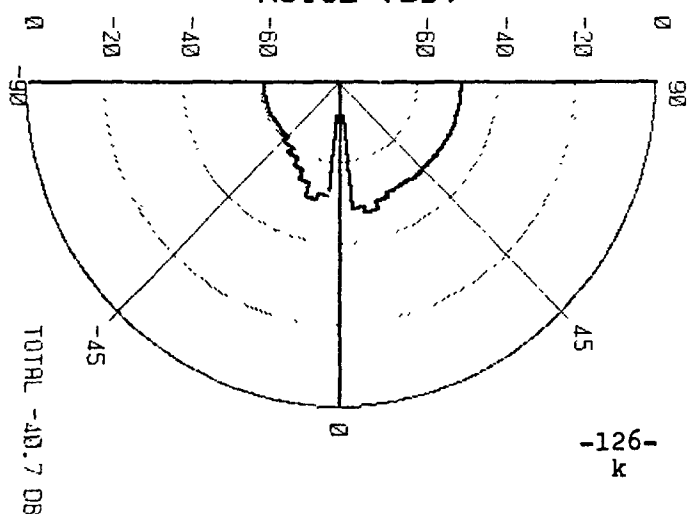
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



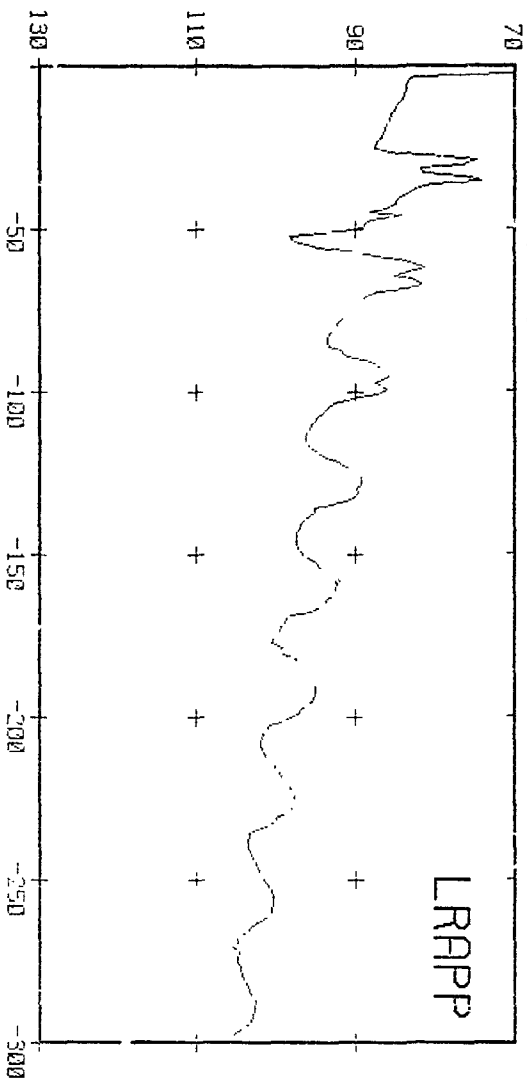
-126-k

AREA 3B SUMNER

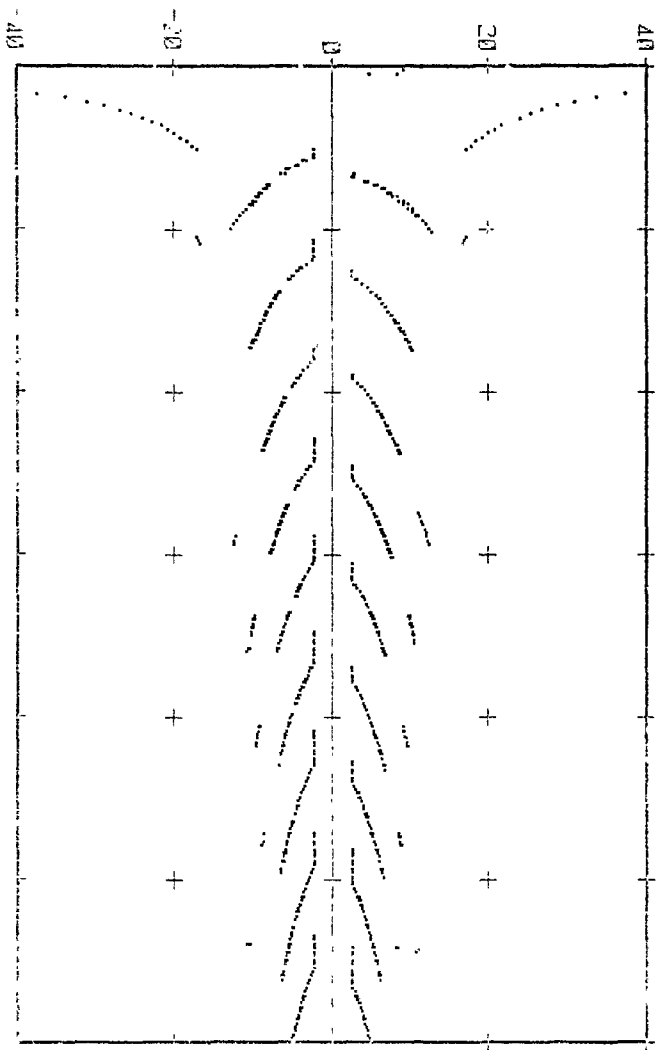
S 233 R 600 F 900

1450 M/S 1500 1550

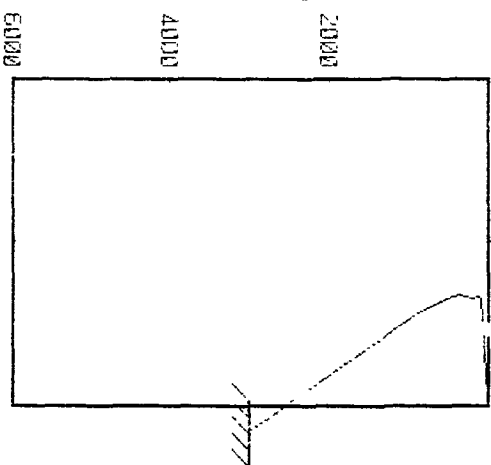
DB LOSS



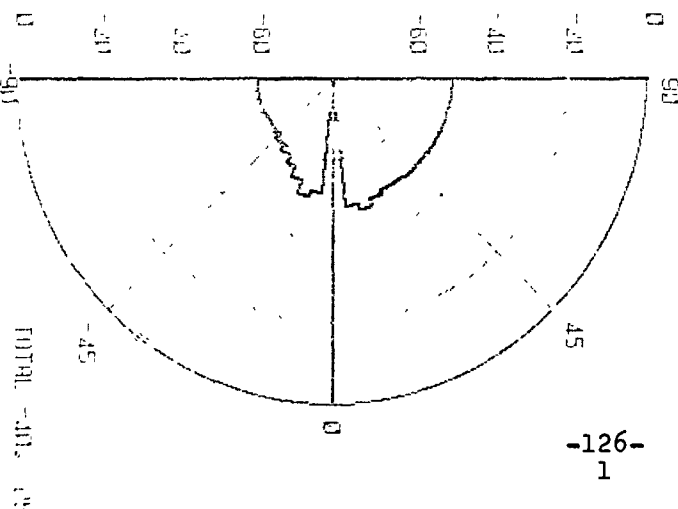
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

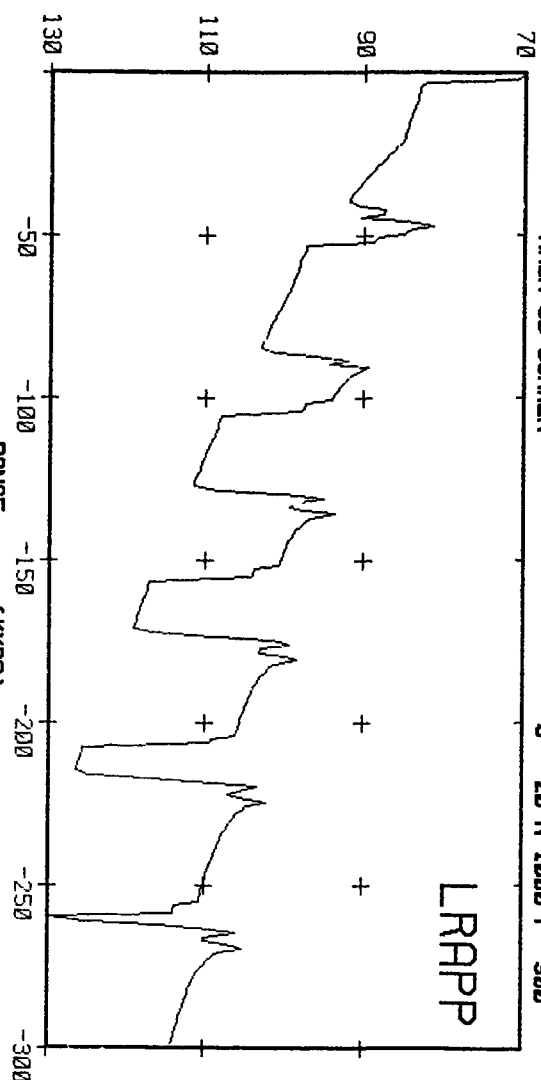


AREA 3B SUMMER

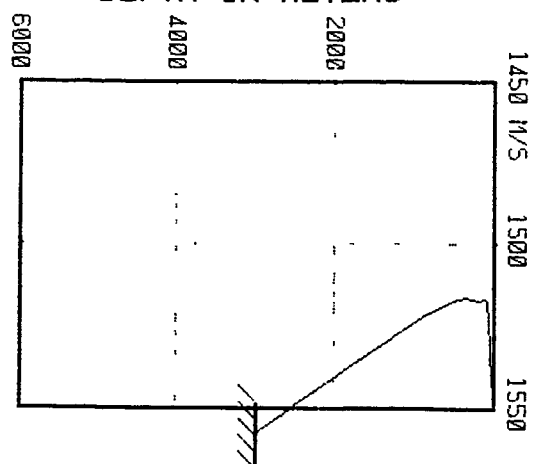
S 20 R 1000 F 900

LRAPP

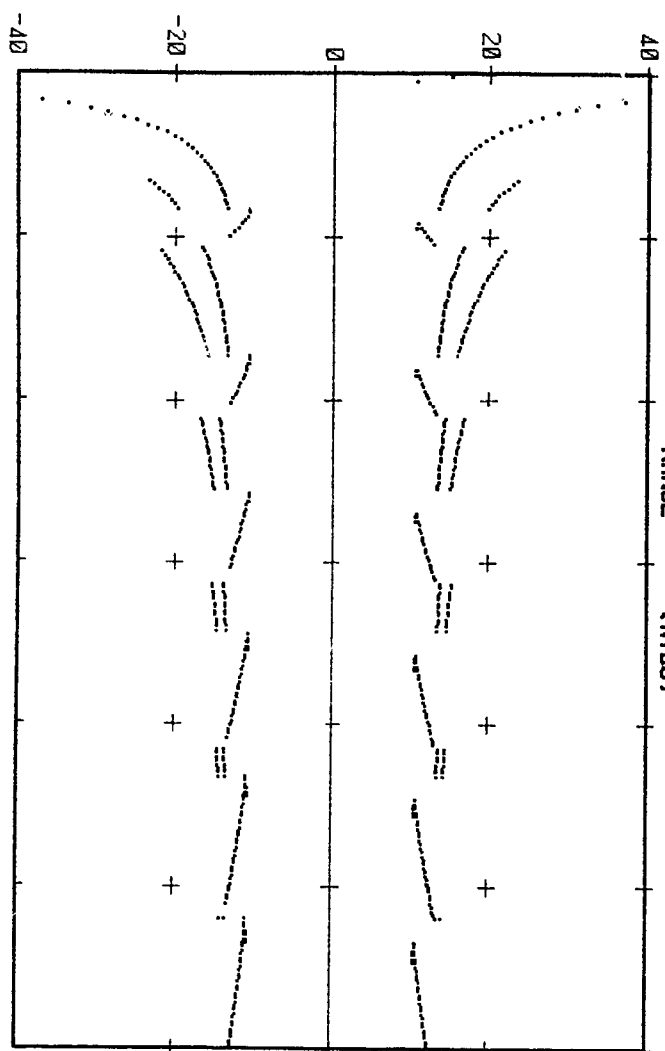
DB LOSS



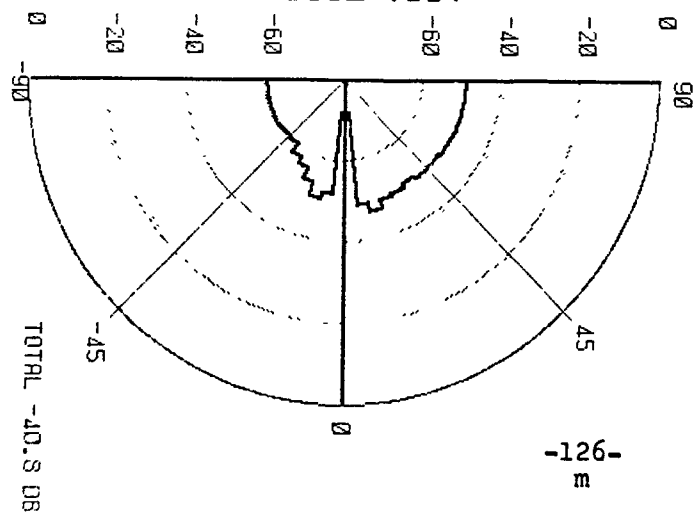
DEPTH IN METERS



ARRIVAL ANGLE



NOISE (DB)



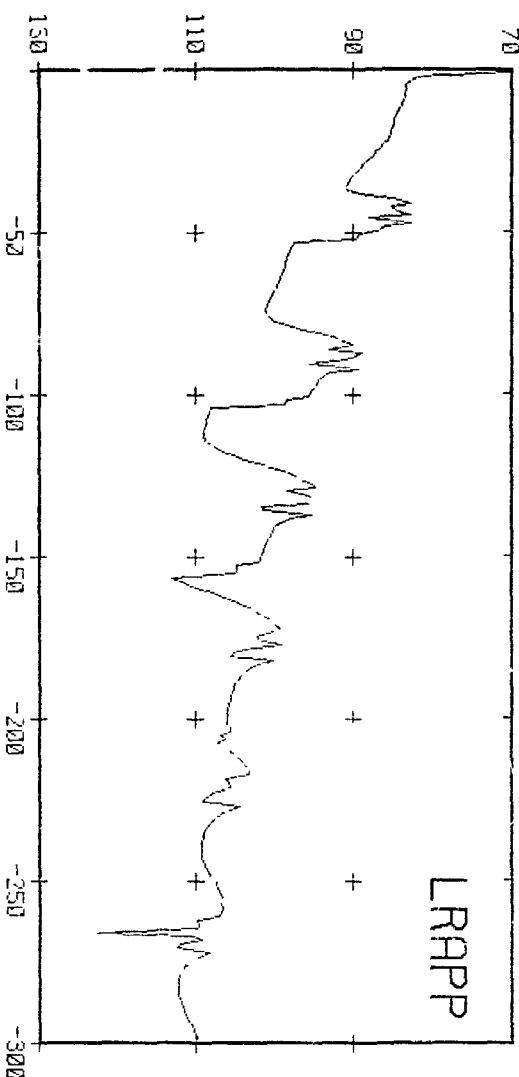
-126-  
M

AREA 3B SUMNER

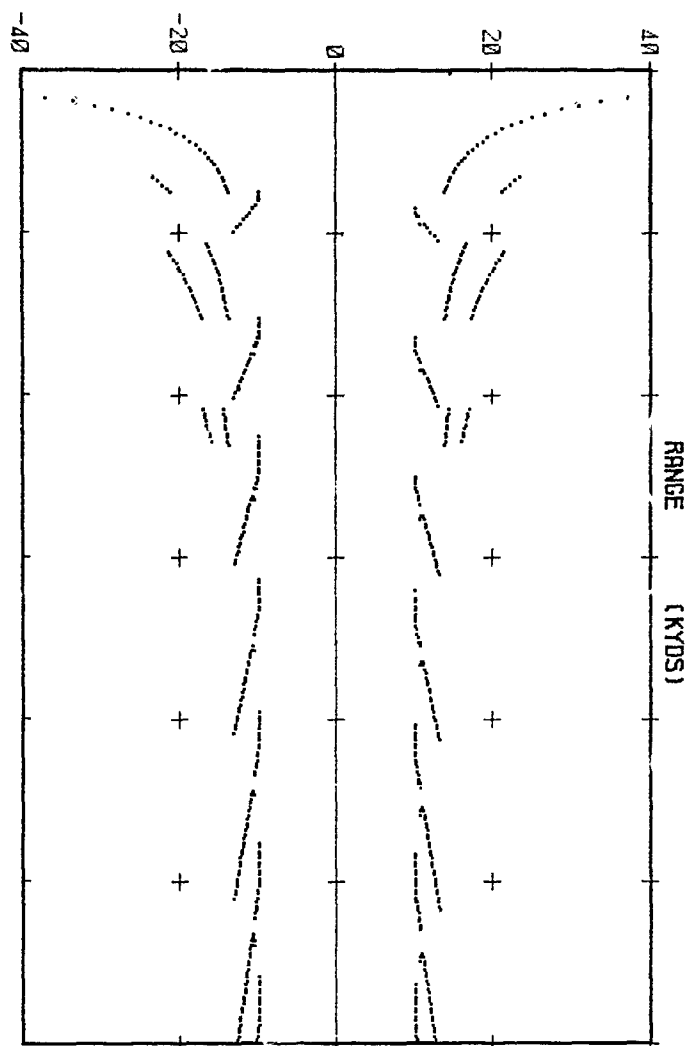
S 53 R 1000 F 900

1450 11/5 1500 1550

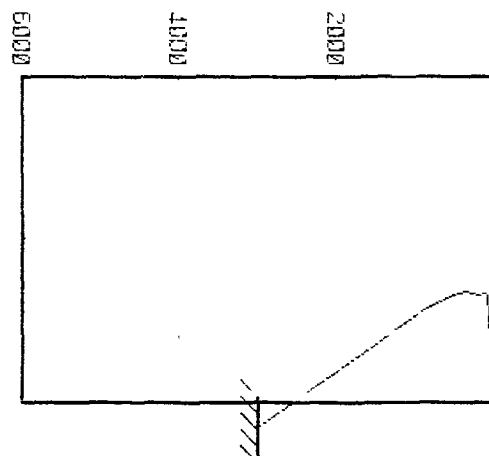
DB LOSS



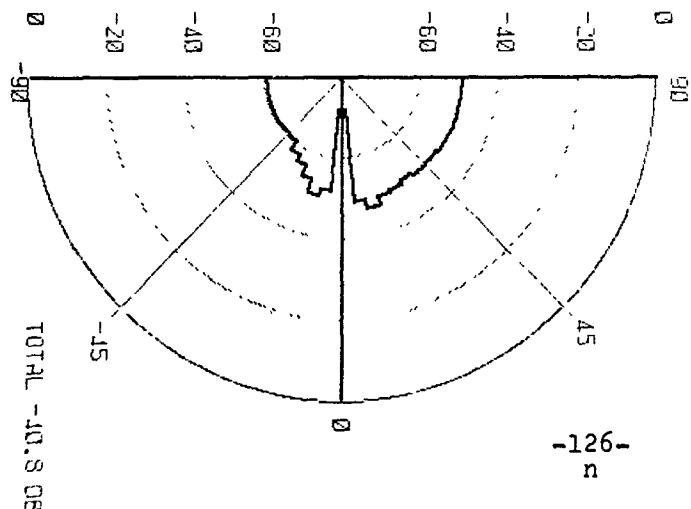
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



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TOTAL -10.8 DB



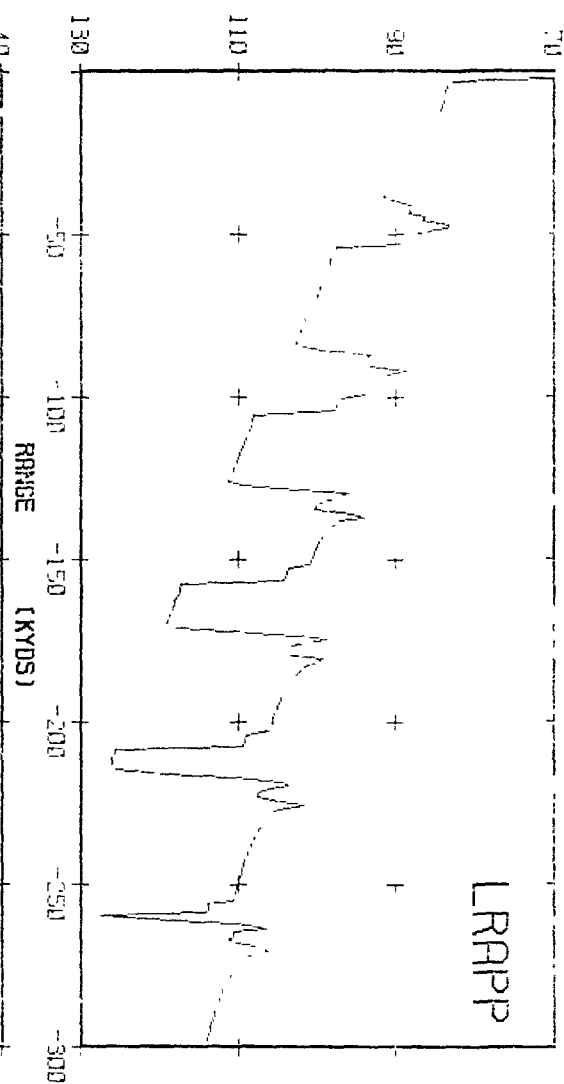


RU-138 SUNKER

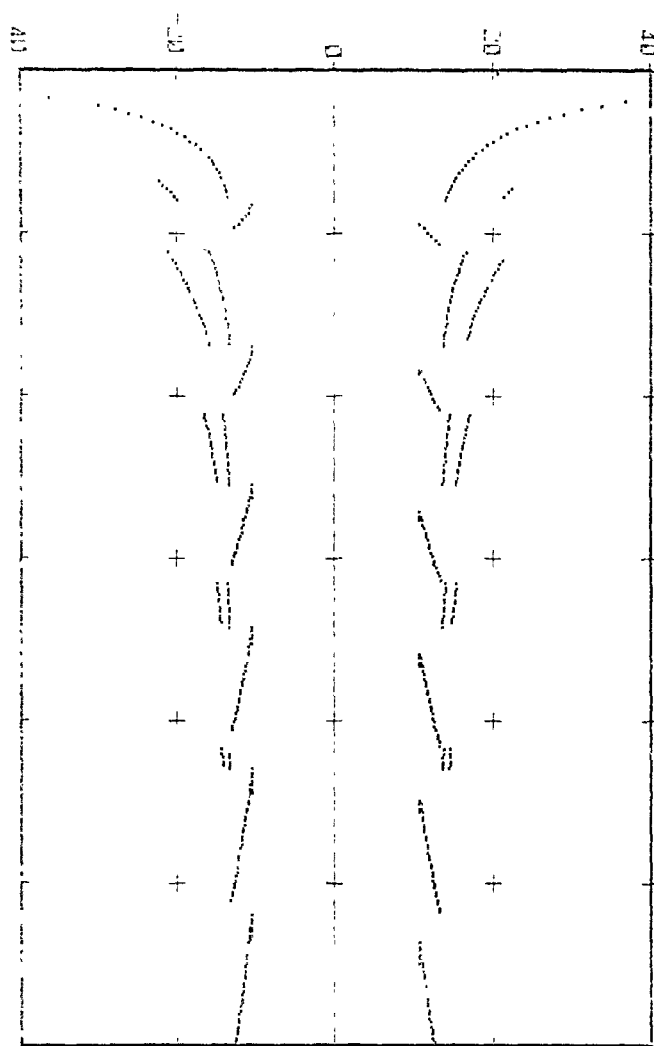
S 20 R 1500 F 900

1450 H 1500 1550

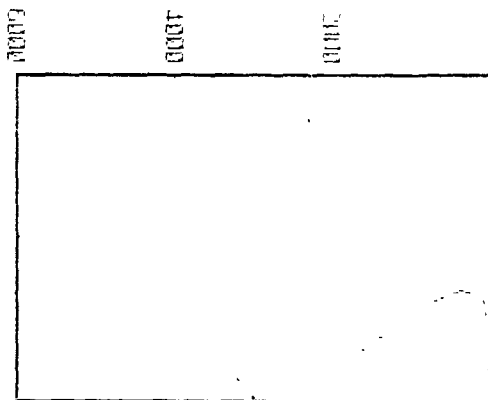
DB LOSS



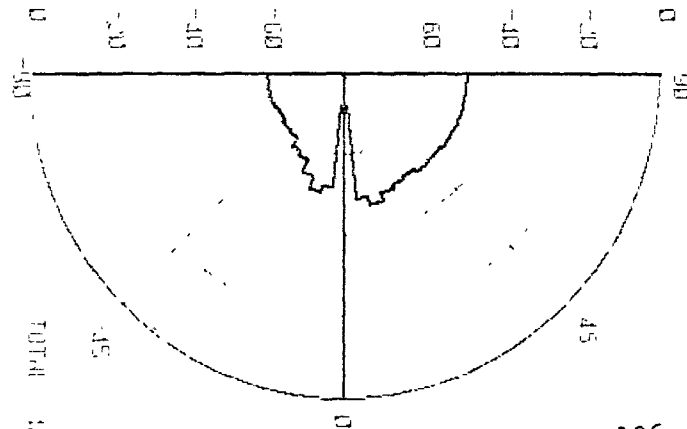
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

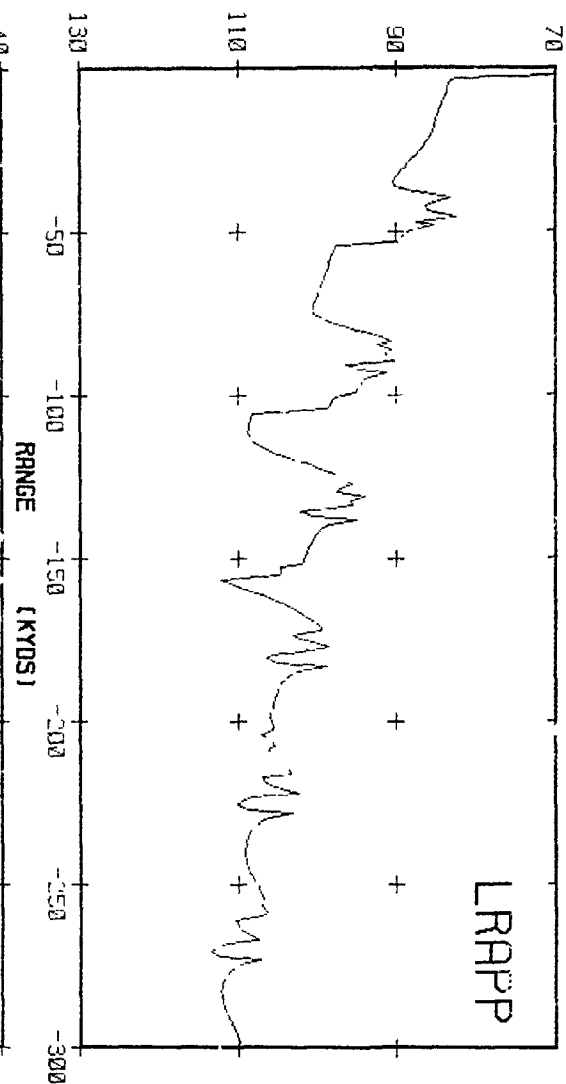


ARRR 38 SUMMER

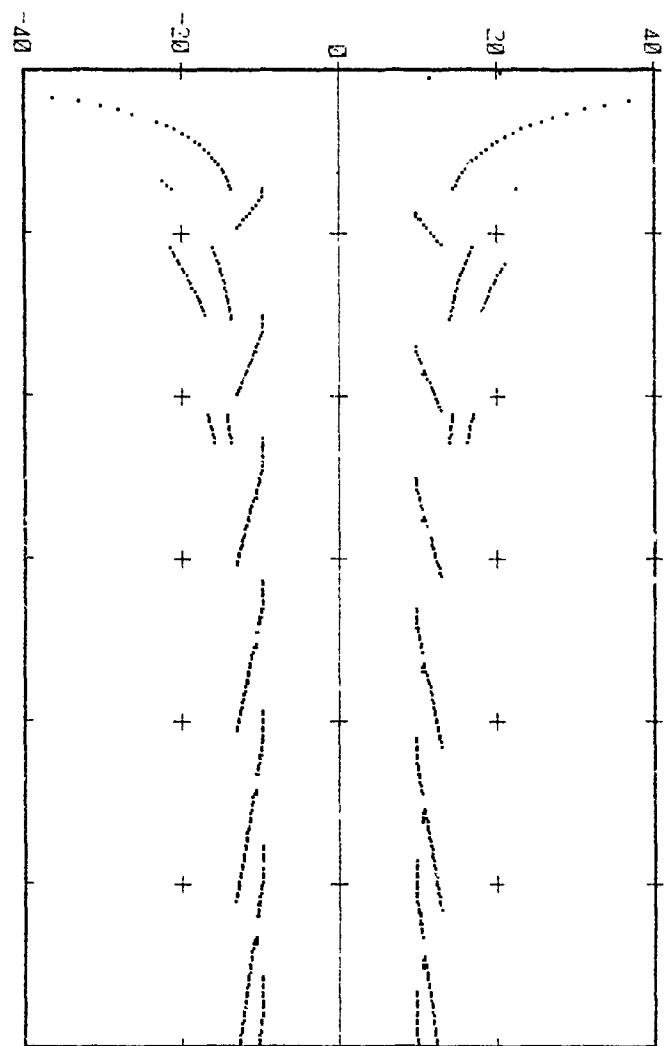
S 50 R 1500 F 900

1450 11/5 1500 1550

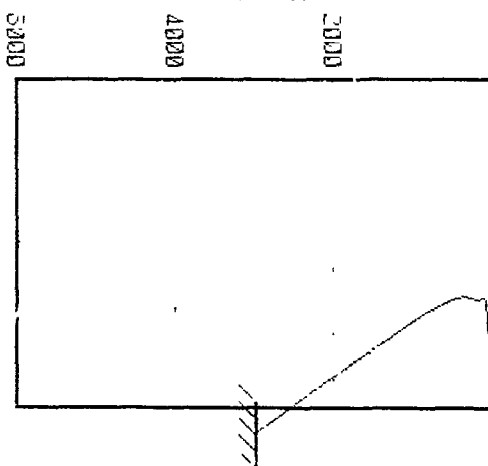
DB LOSS



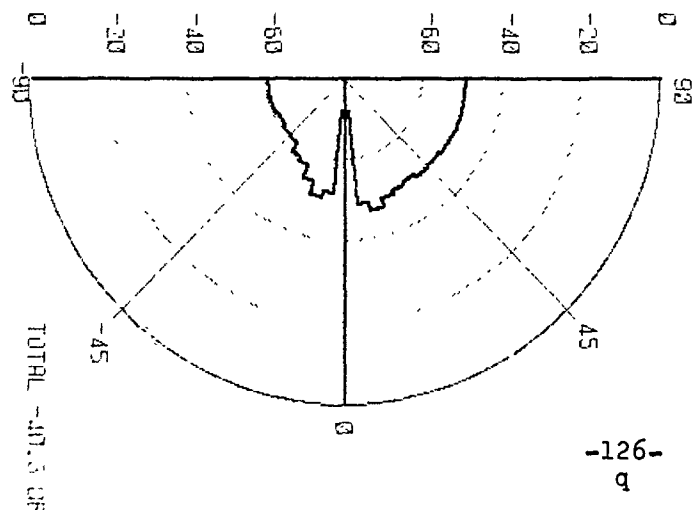
ARRIVAL ANGLE



DEPTH IN METERS

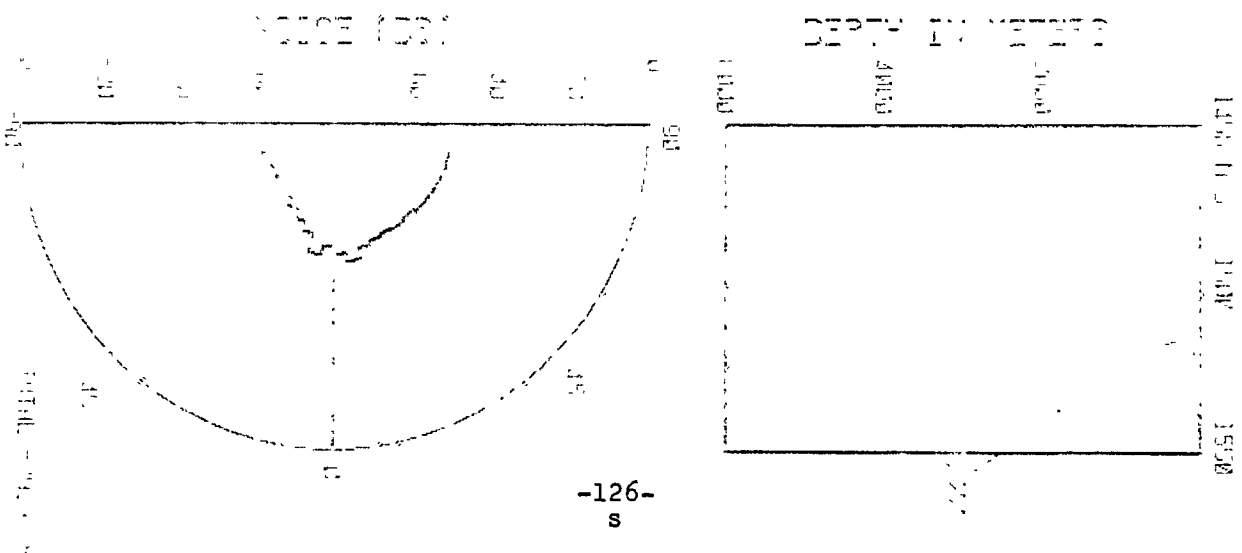


NOISE (DB)



-126-  
q



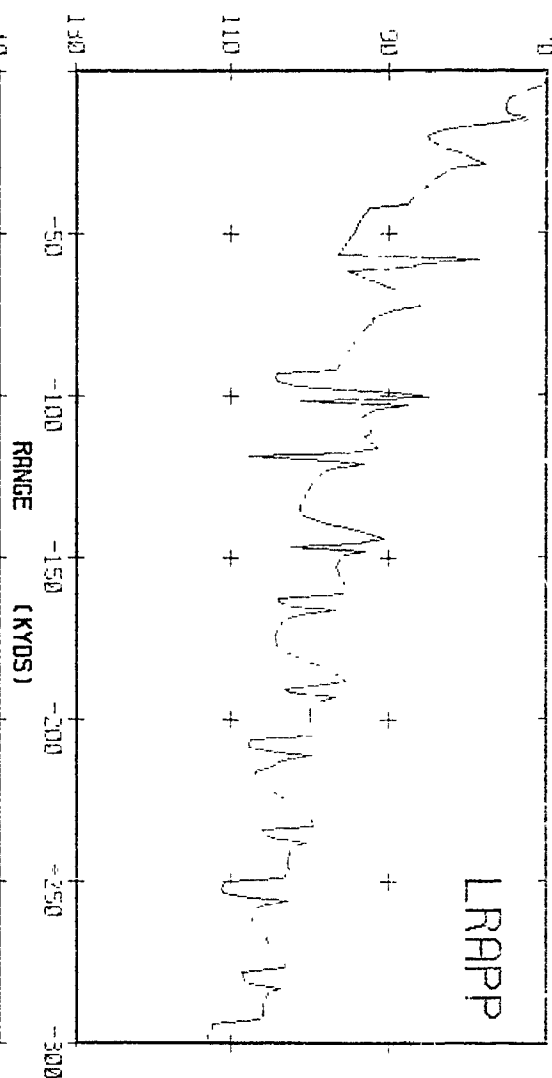


AREA 3B SUMMER

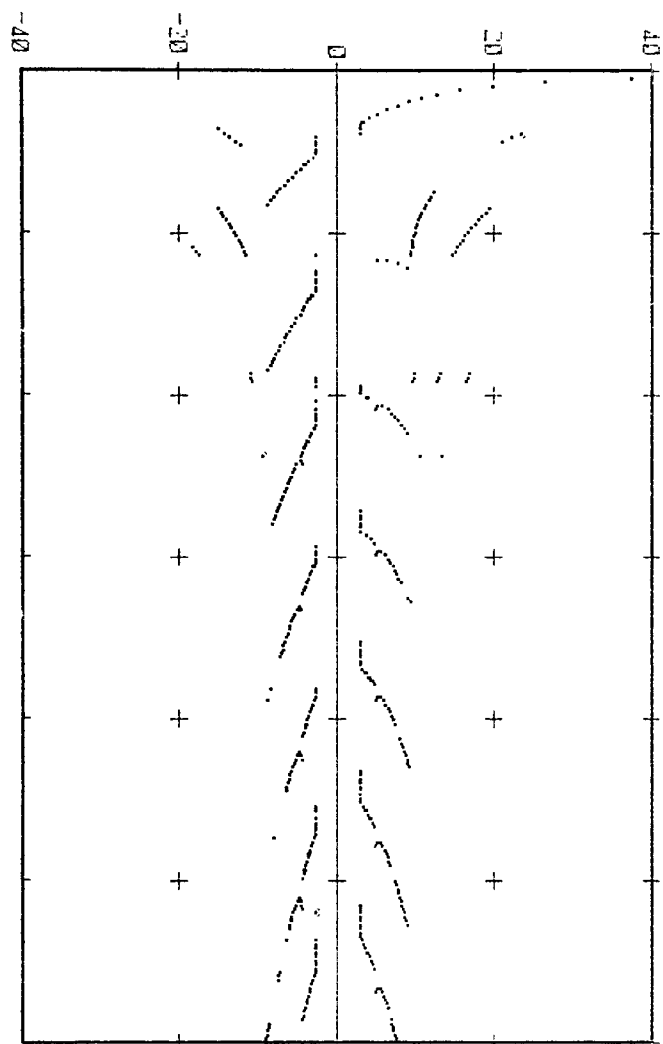
S 50 R 6000 F 900

1450 H. S. 1500 1550

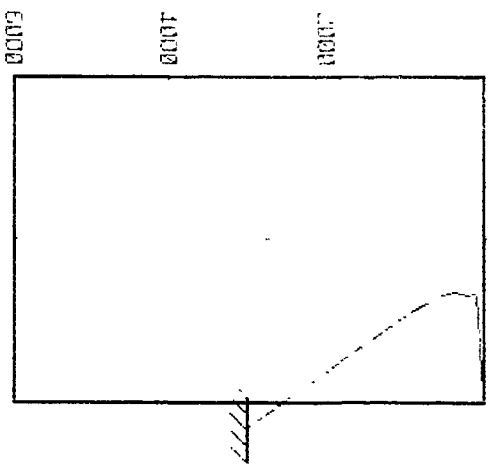
DB LOSS



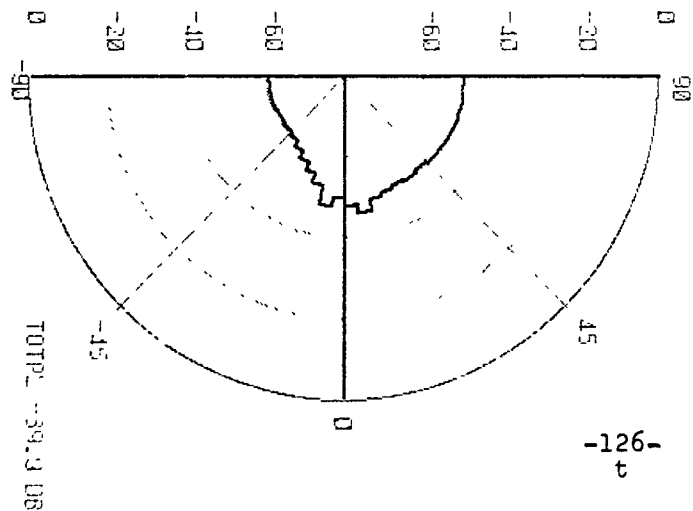
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

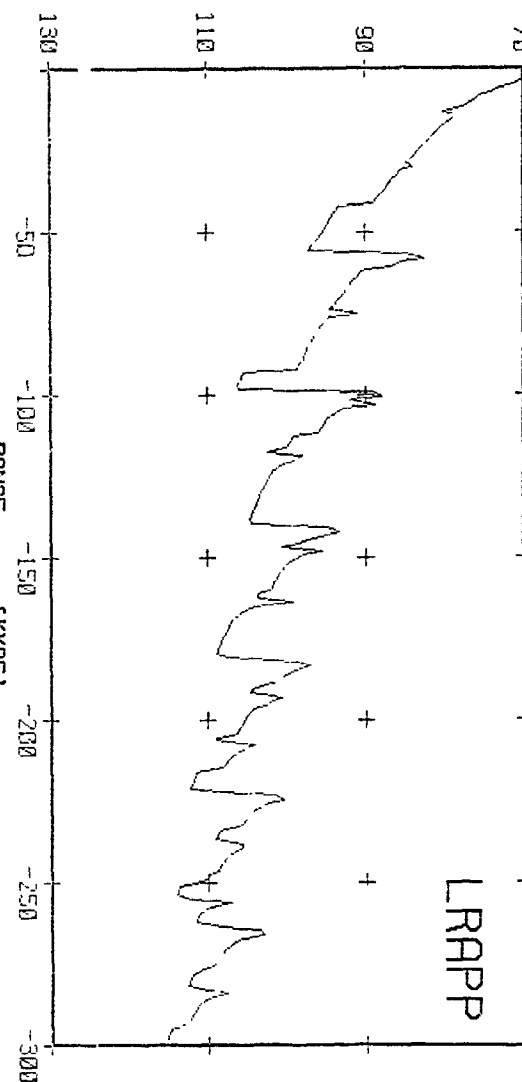


AREA 3B SUMMER

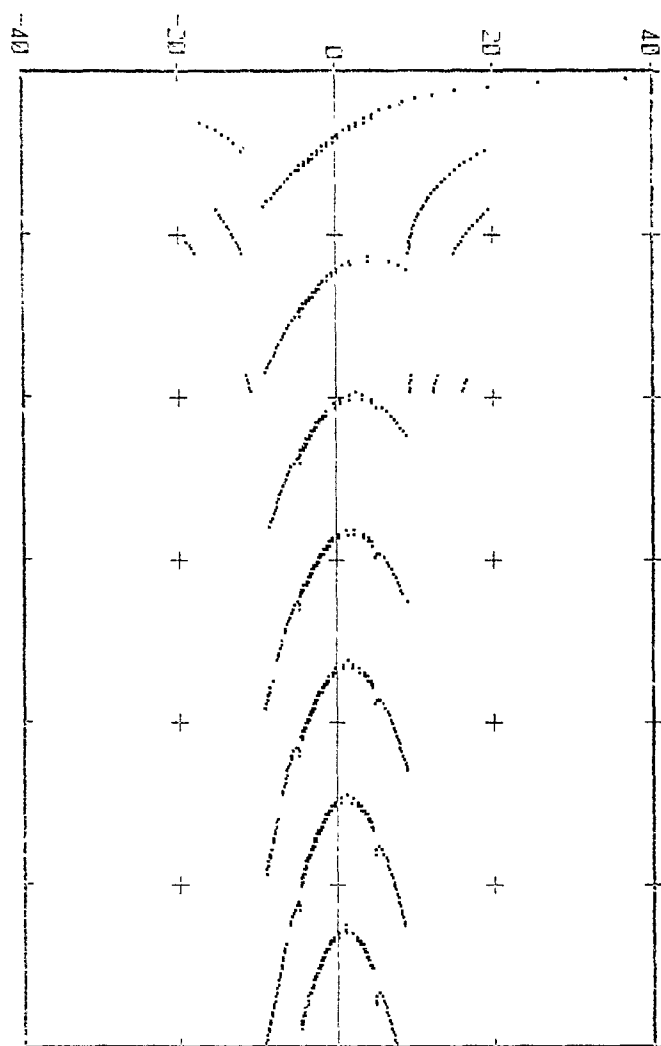
S 233 R 6000 F 980

1450 11/5 1500 1550

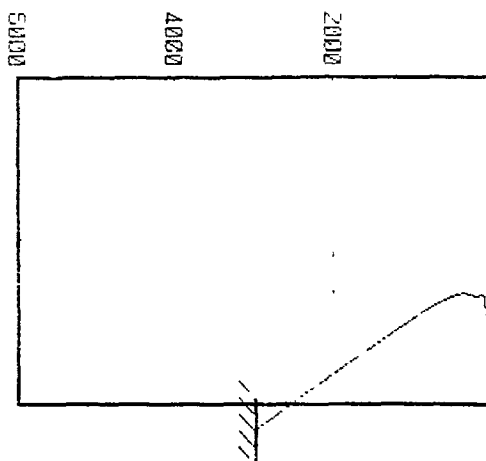
DB LOSS



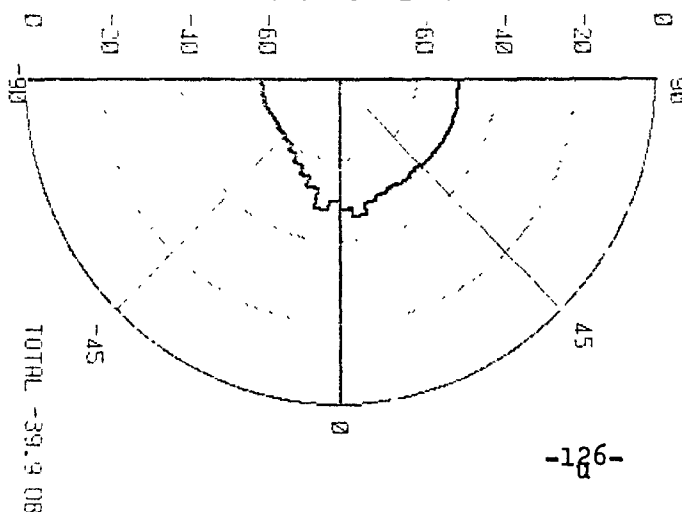
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



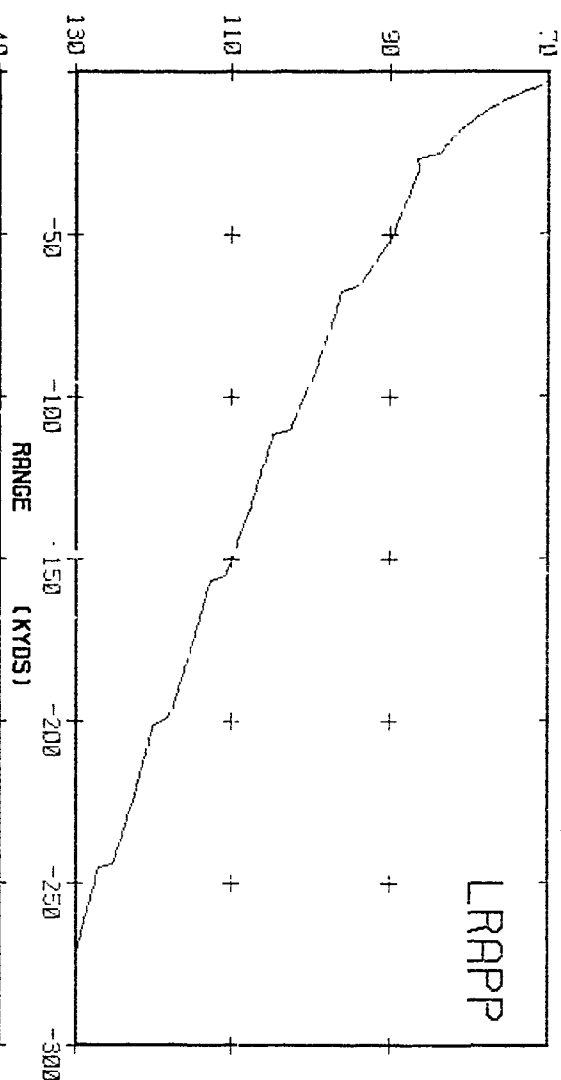
ARRR 3B SUMMER

S 20 R 3842 F 980

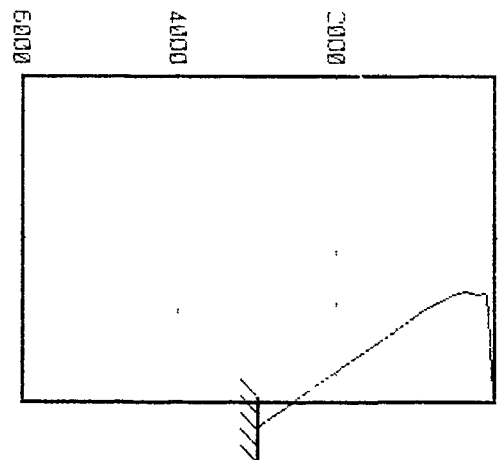
1450 14/5 1500 1550

LRAPP

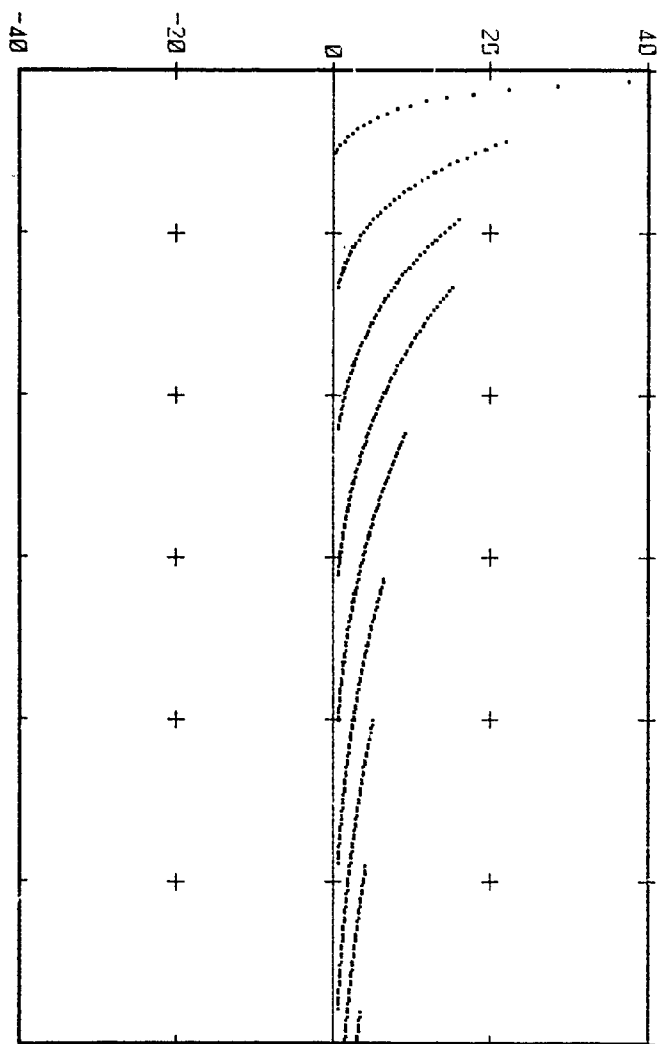
DB LOSS



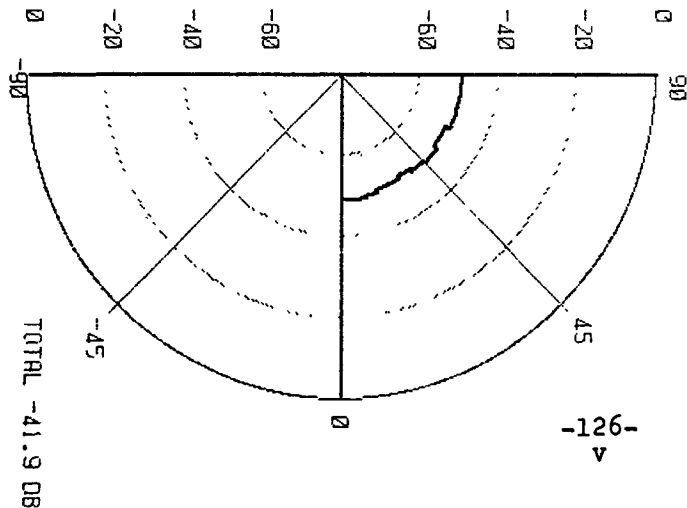
DEPTH IN METERS



ARRIVAL ANGLE



NOISE (DB)



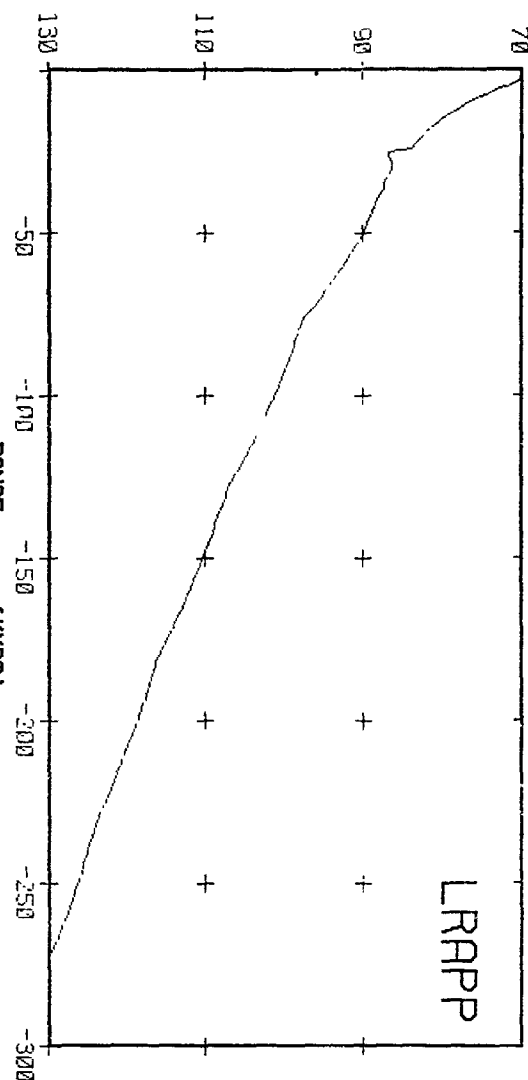
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A

RRER 3B SUMMER

S 50 R 9842 F 900

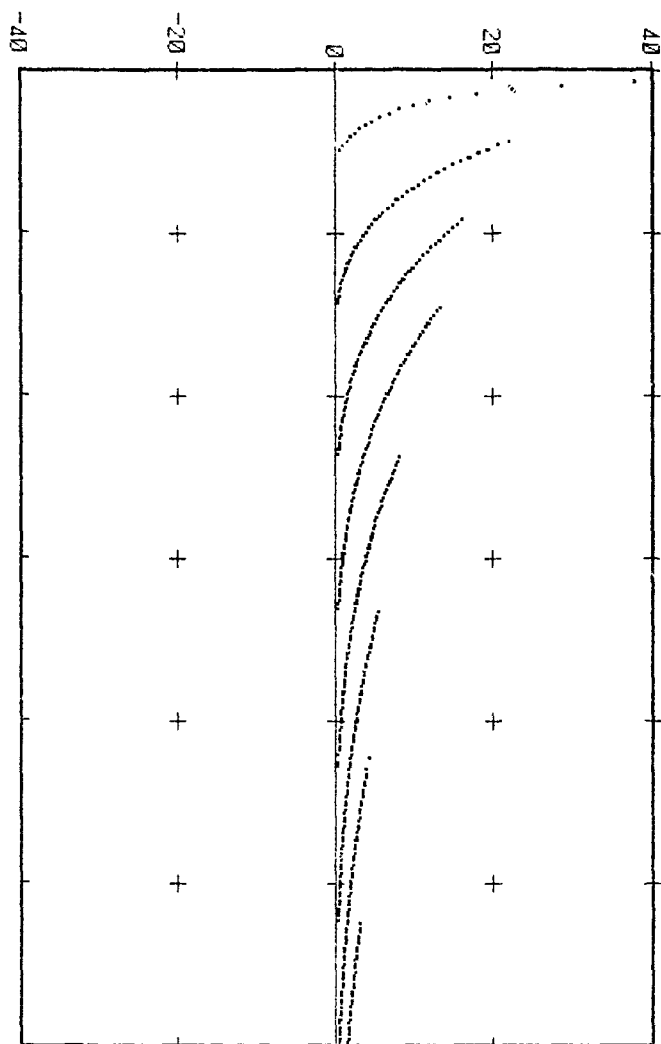
1450 M/S 1500 1550

DB LOSS

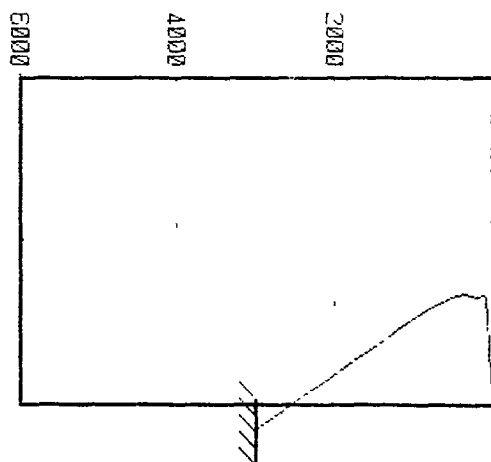


LRAPP

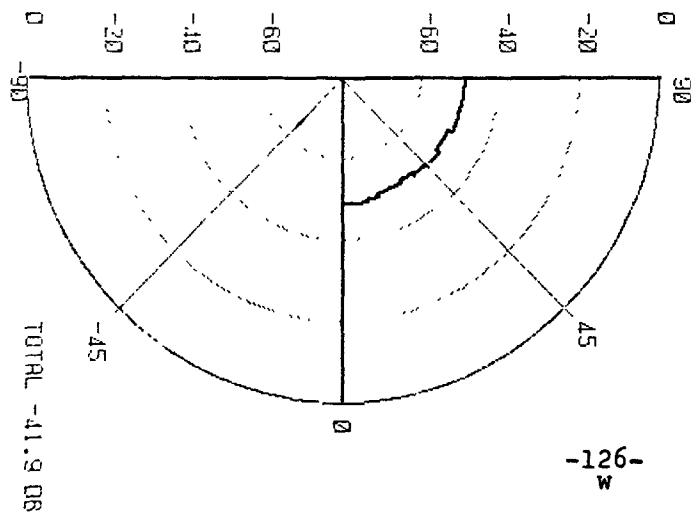
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



-126-  
W

TOTAL -41.9 DB

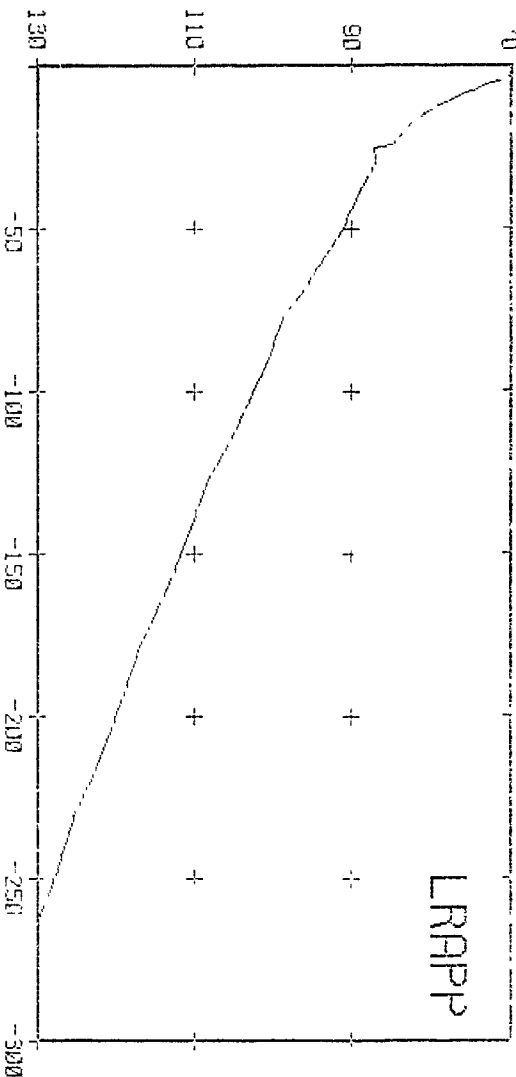


AREA 36 SUMMER

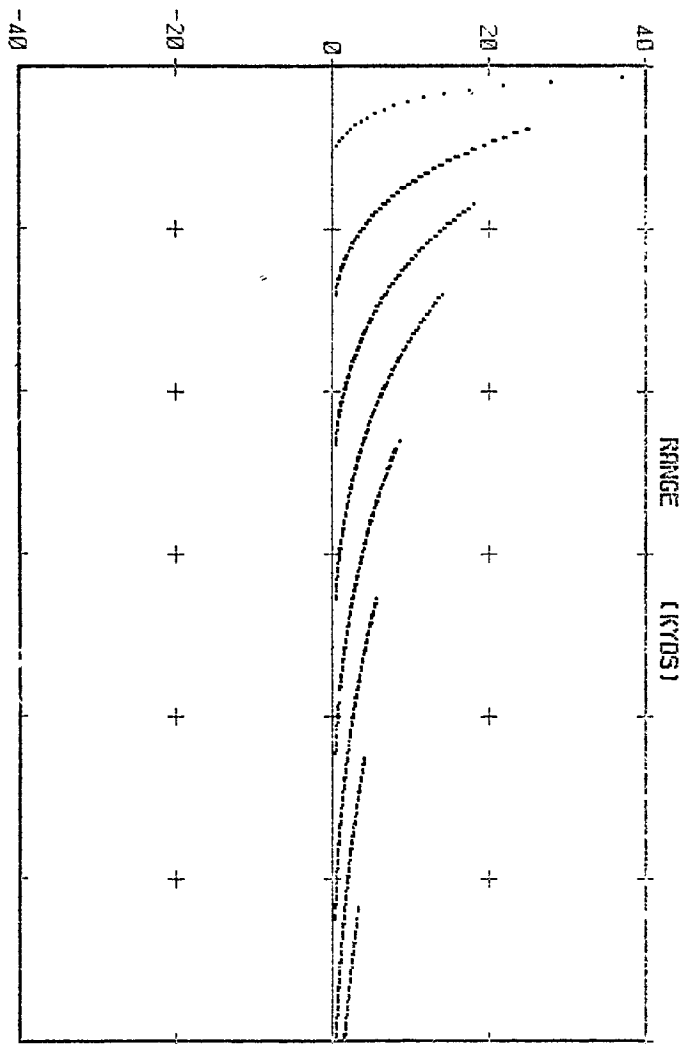
S 233 R 9642 F 950

1450 1455 1500 1550

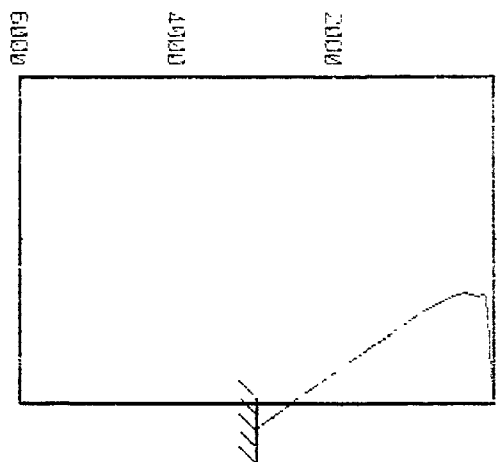
DB LOSS



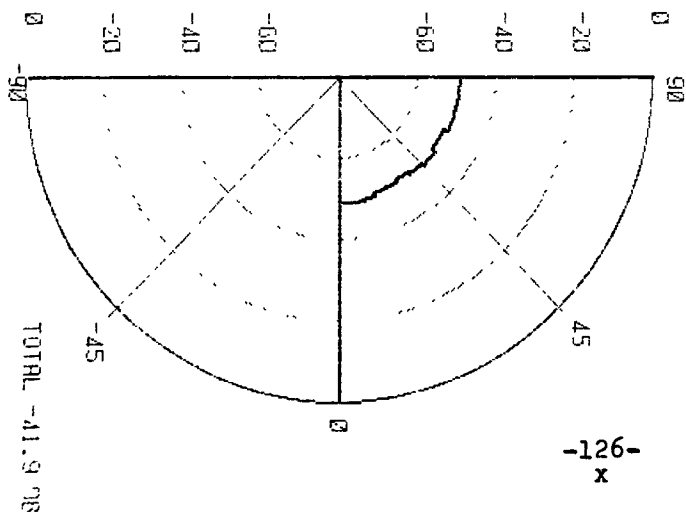
ARRIVAL ANGLE

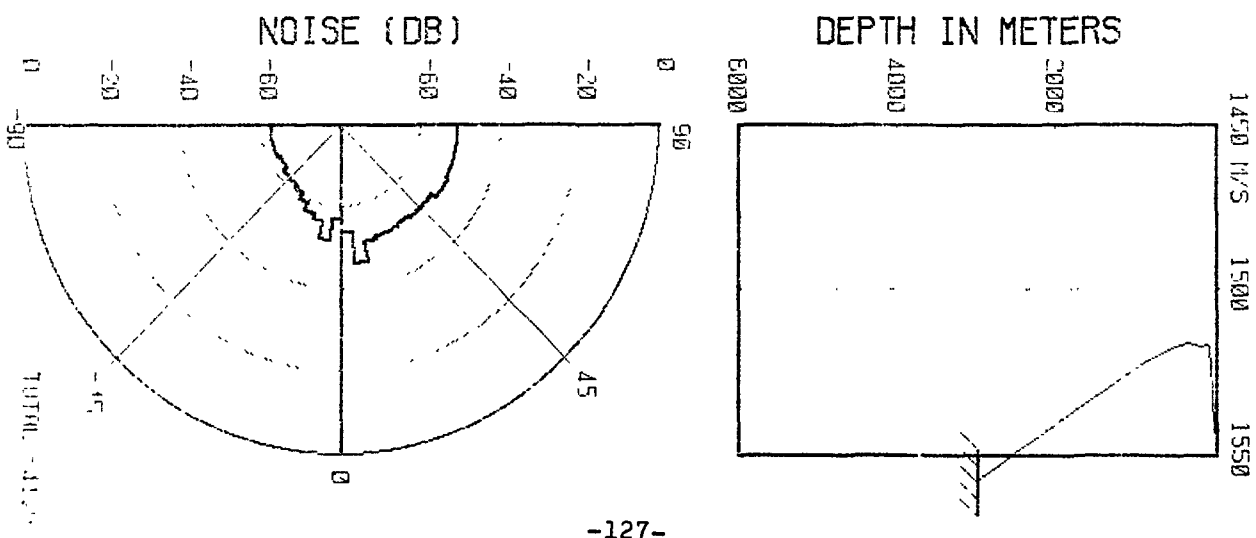
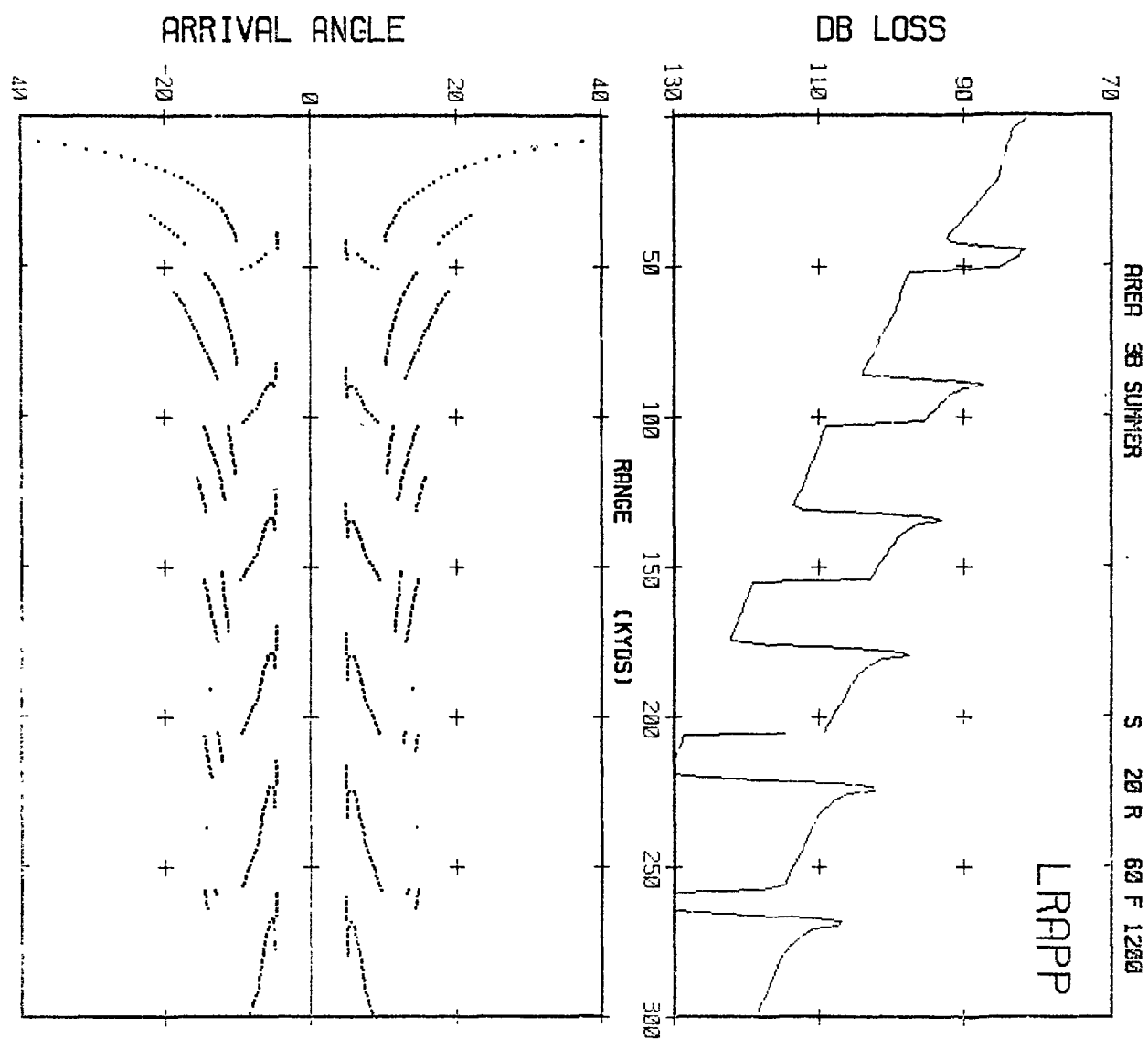


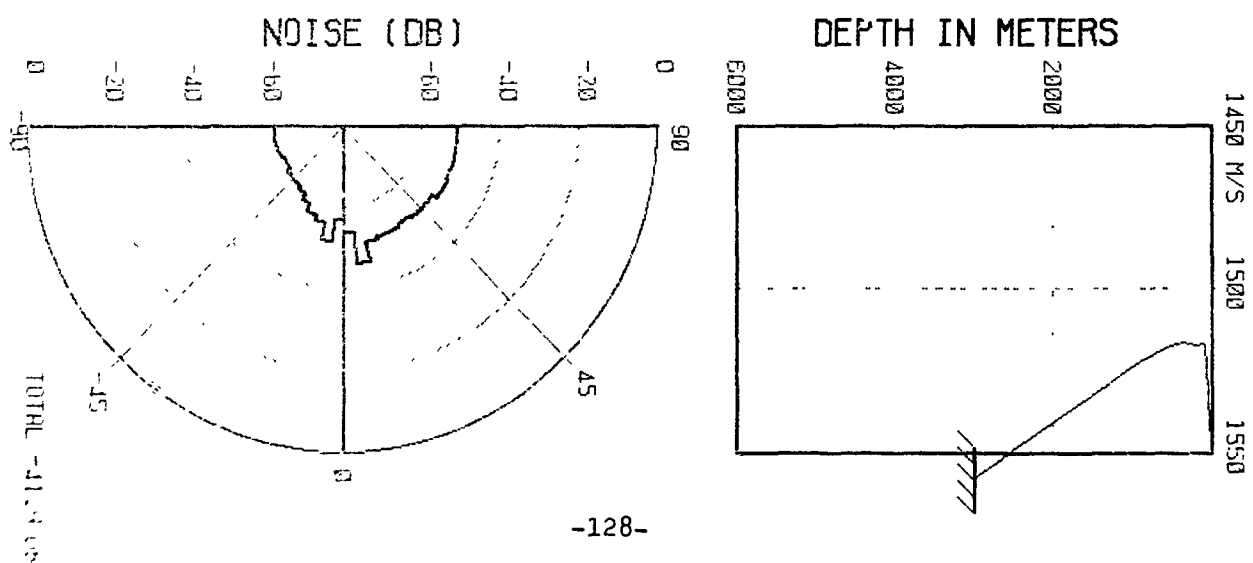
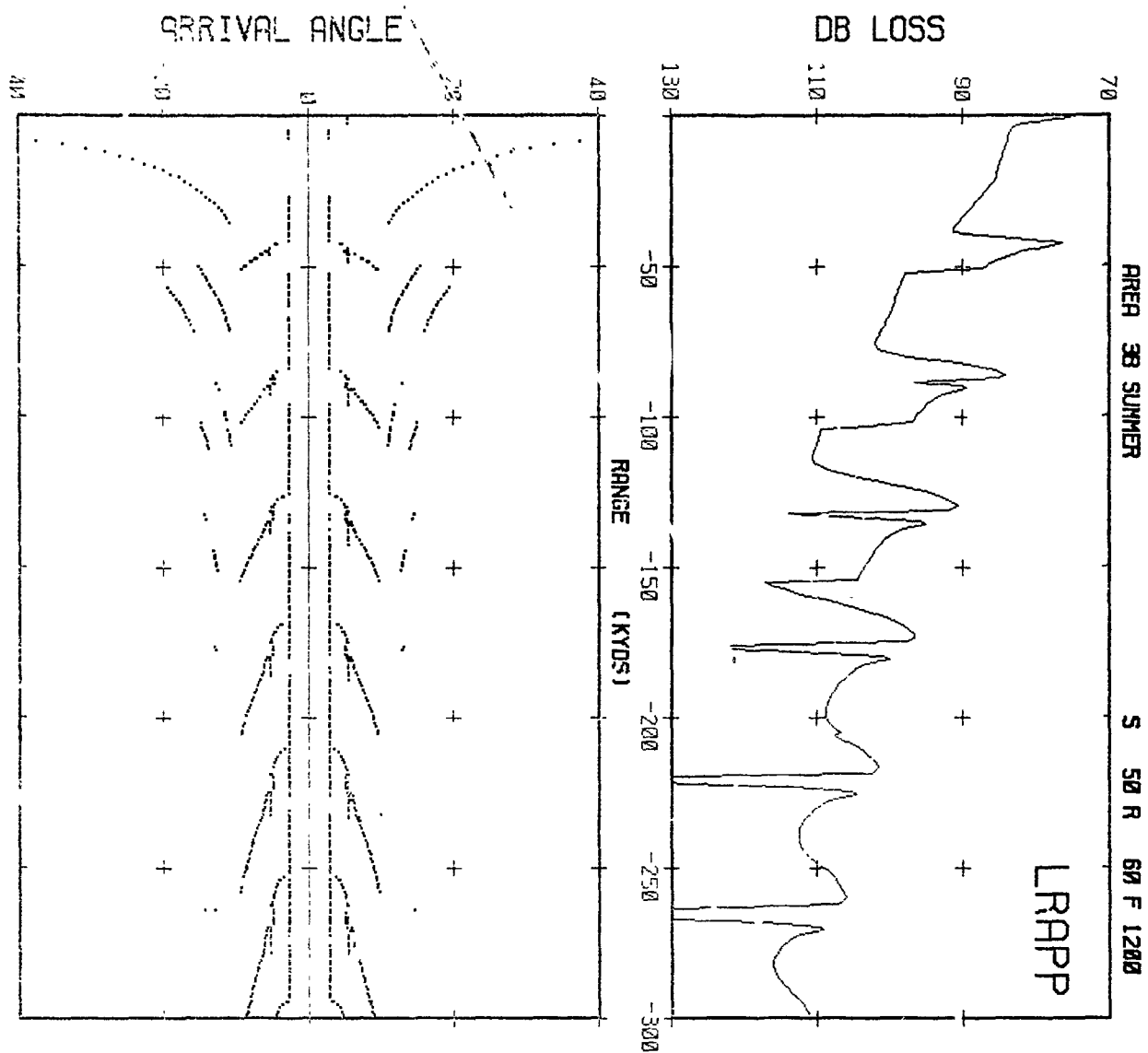
DEPTH IN METERS



NOISE (DB)







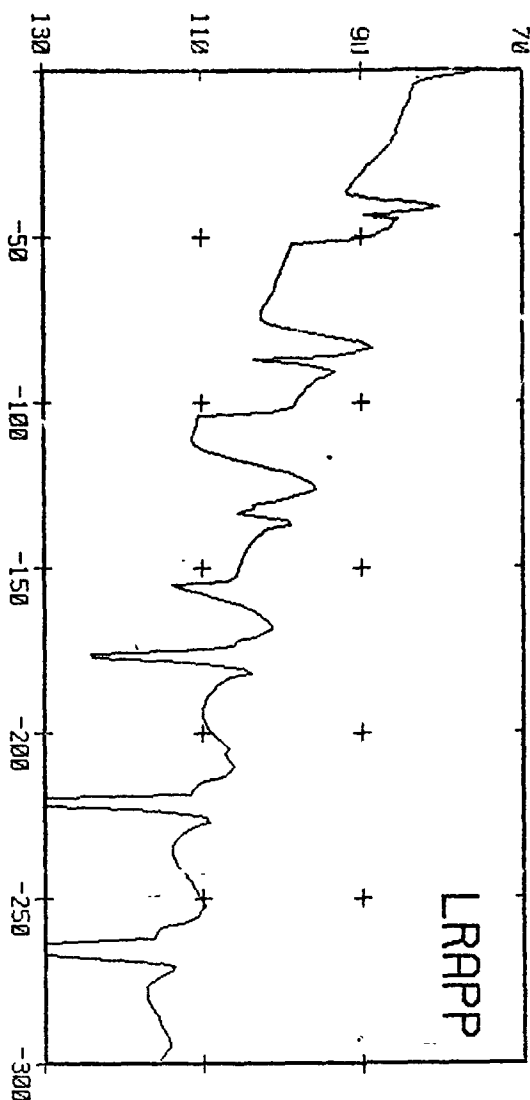
AREA 38 SUMMER

S 233 R 60 F 1200

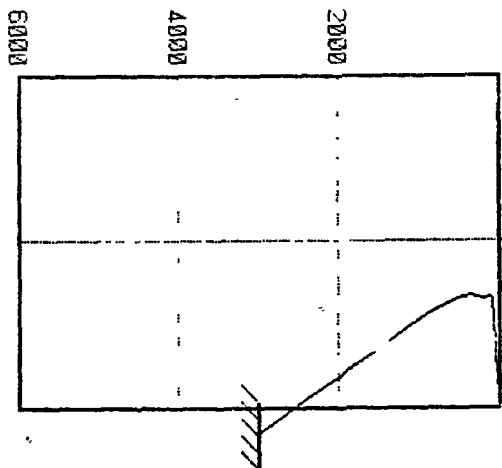
1450 M/S 1500

1510

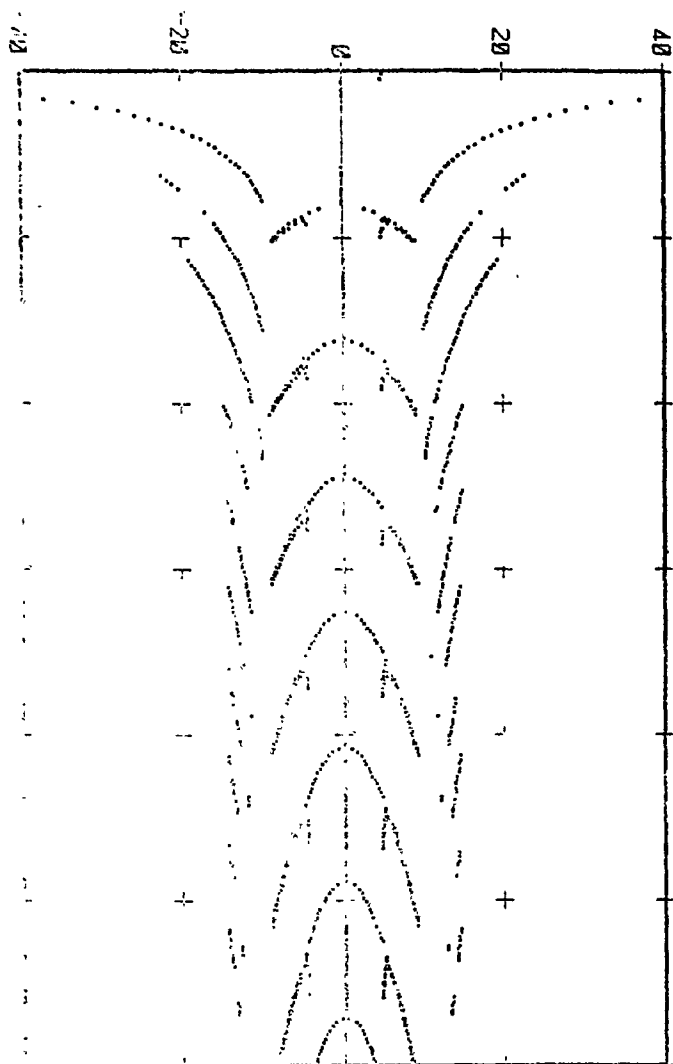
DB LOSS



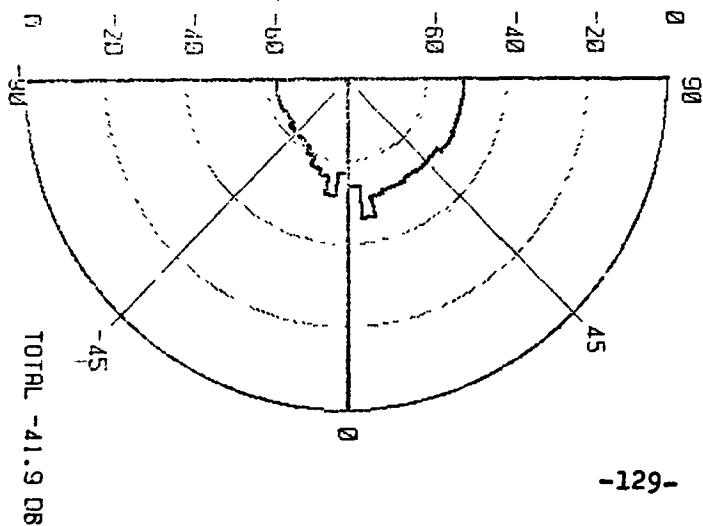
DEPTH IN METERS



ARRIVAL ANGLE



NOISE (DB)



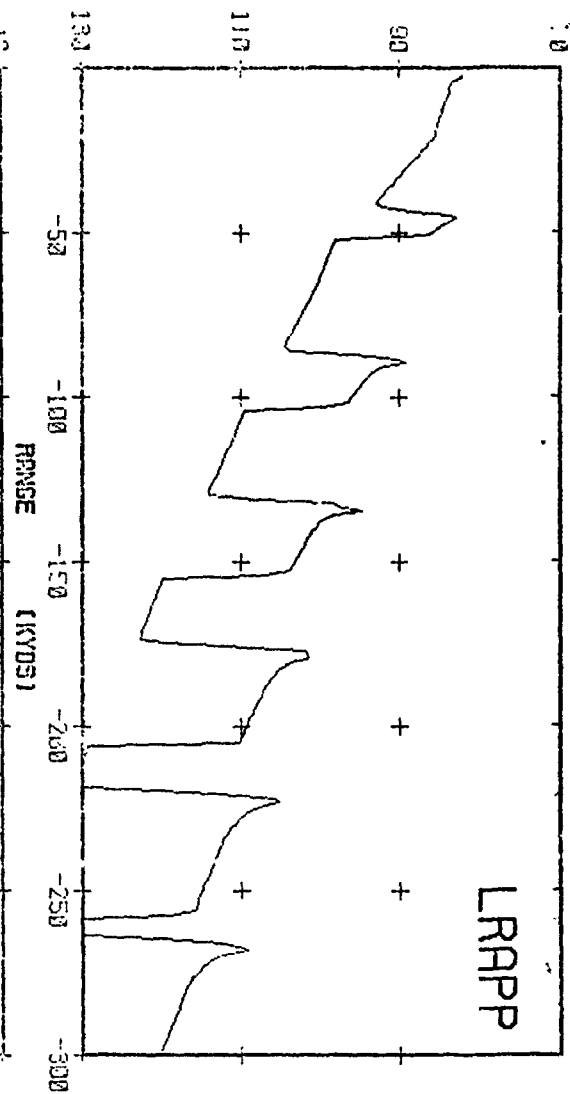
MSS AREA 38 SUMMER

5 20 R 133 F 1200

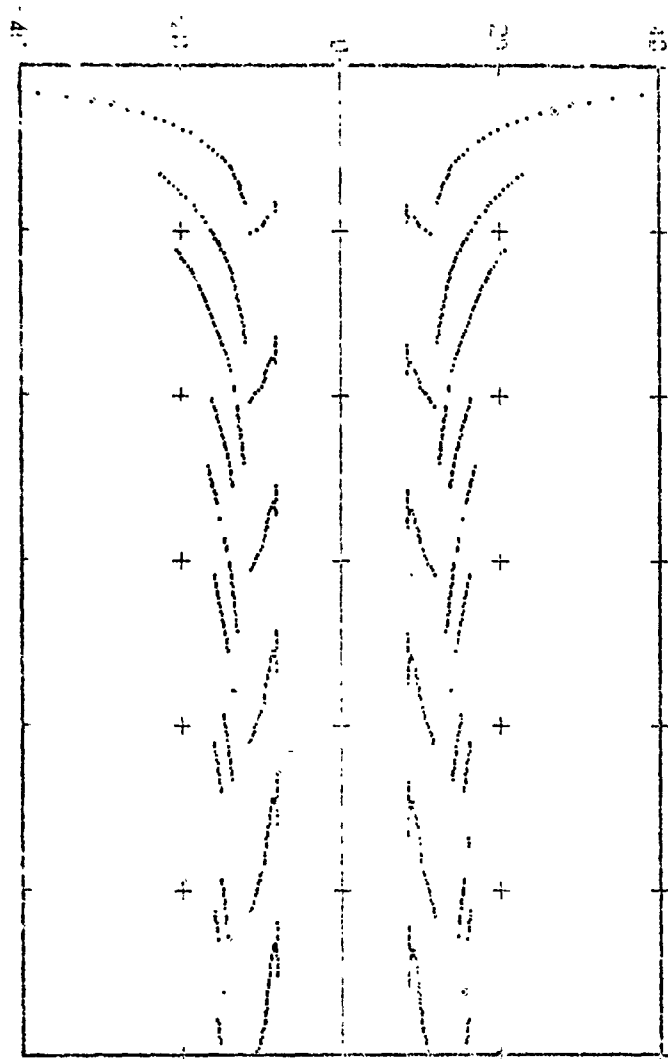
1450 11/5 1500

1550

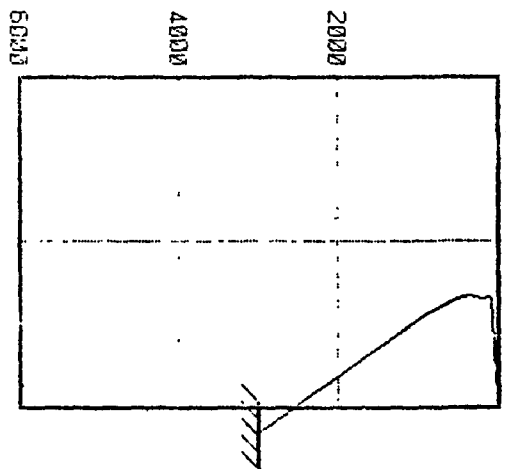
DB LOSS



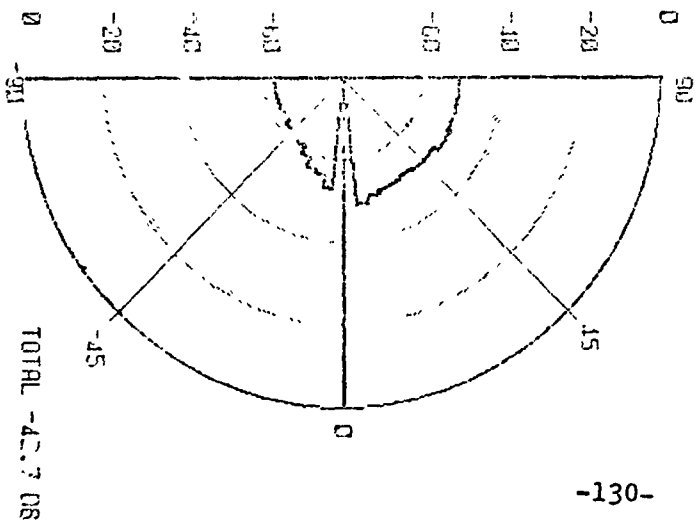
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



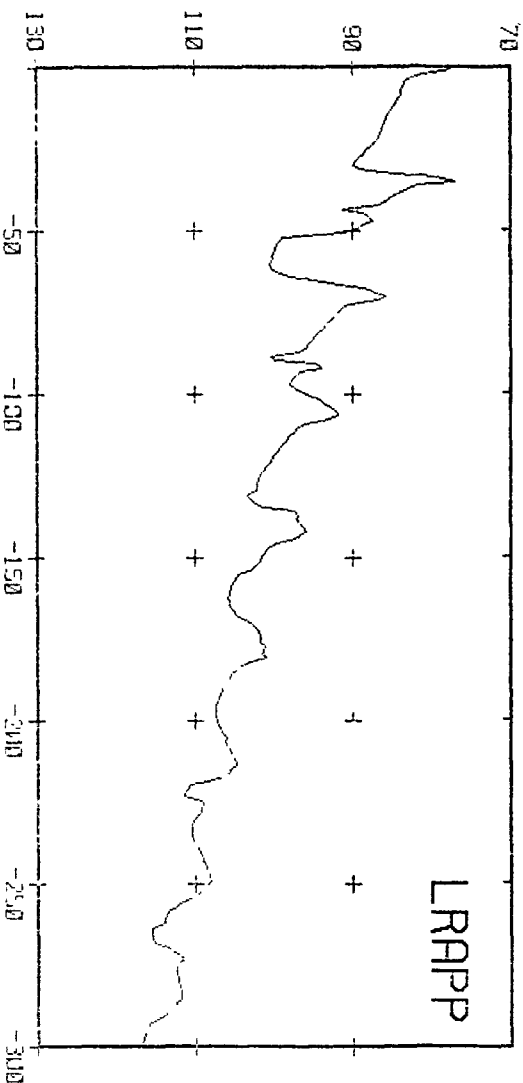


MSS AREA 38 SUMMER

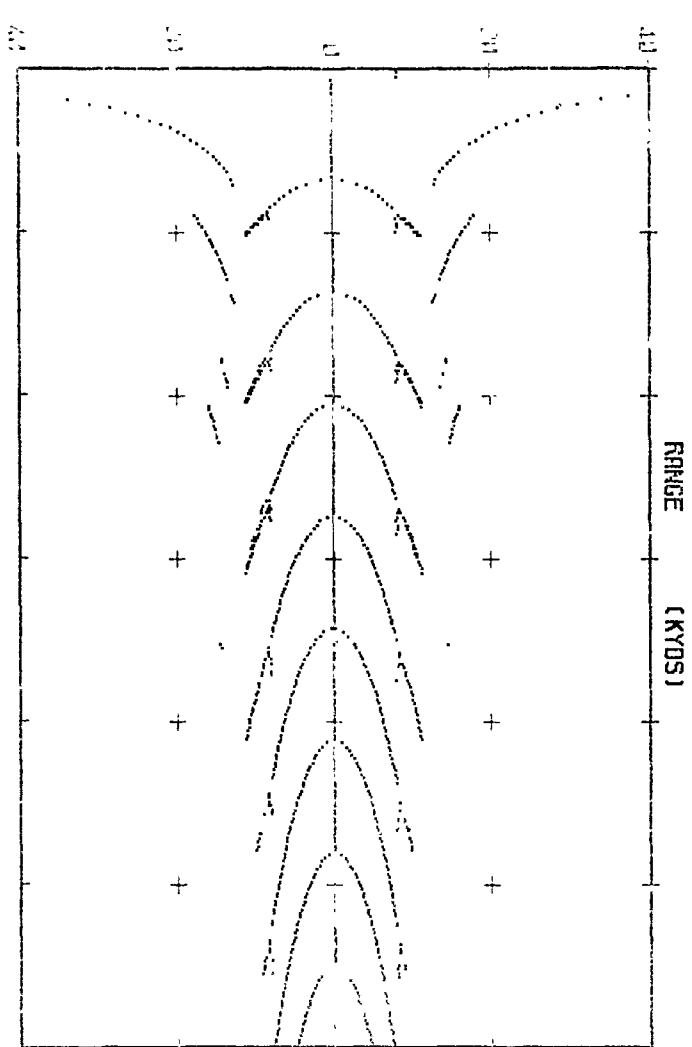
S 233 R 133 F 1200

1450 N/S 1500 1550

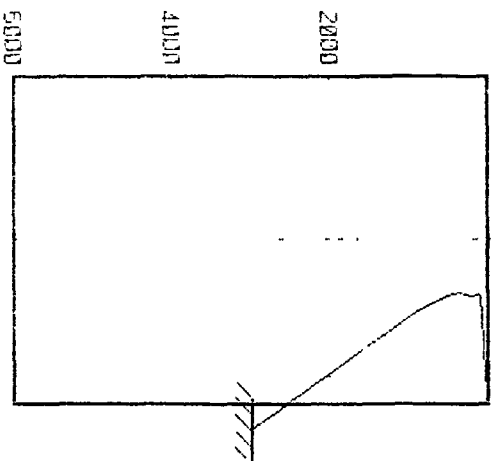
DB LOSS



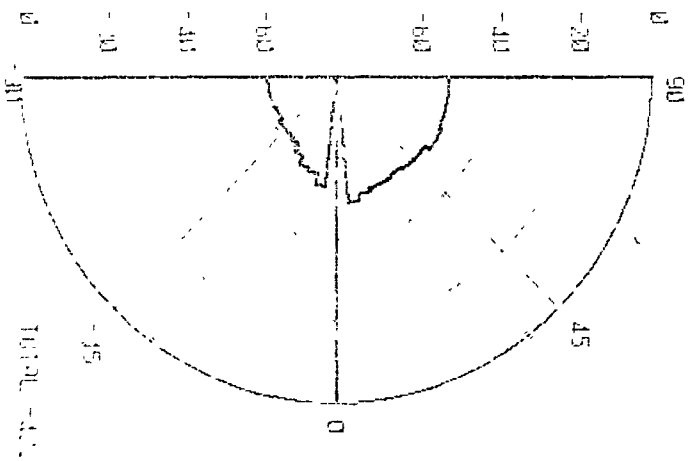
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



AREA 38 SUMMER

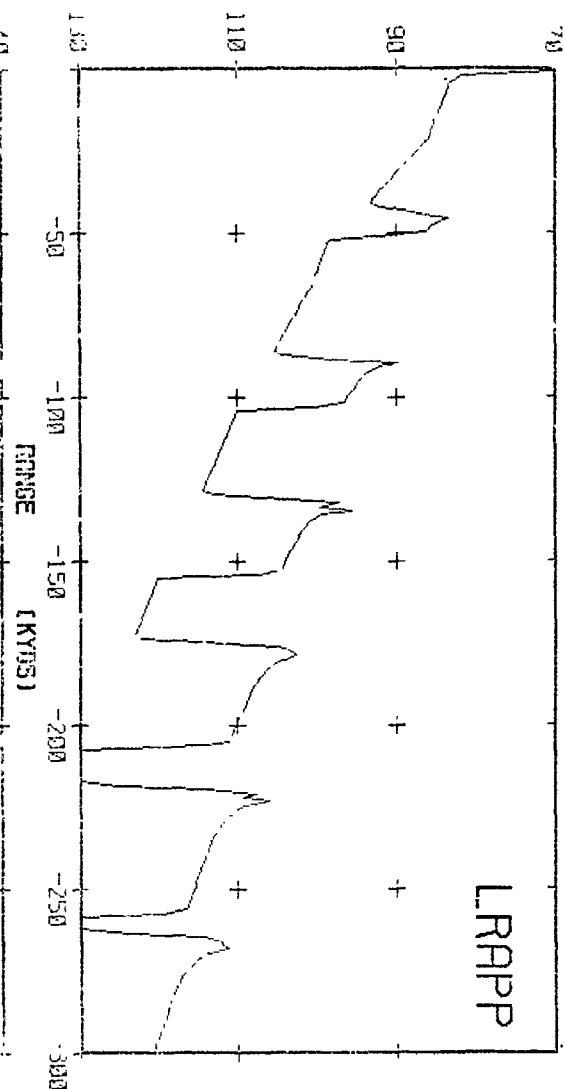
S 20 R 360 F 1200

1450 M/S 1500

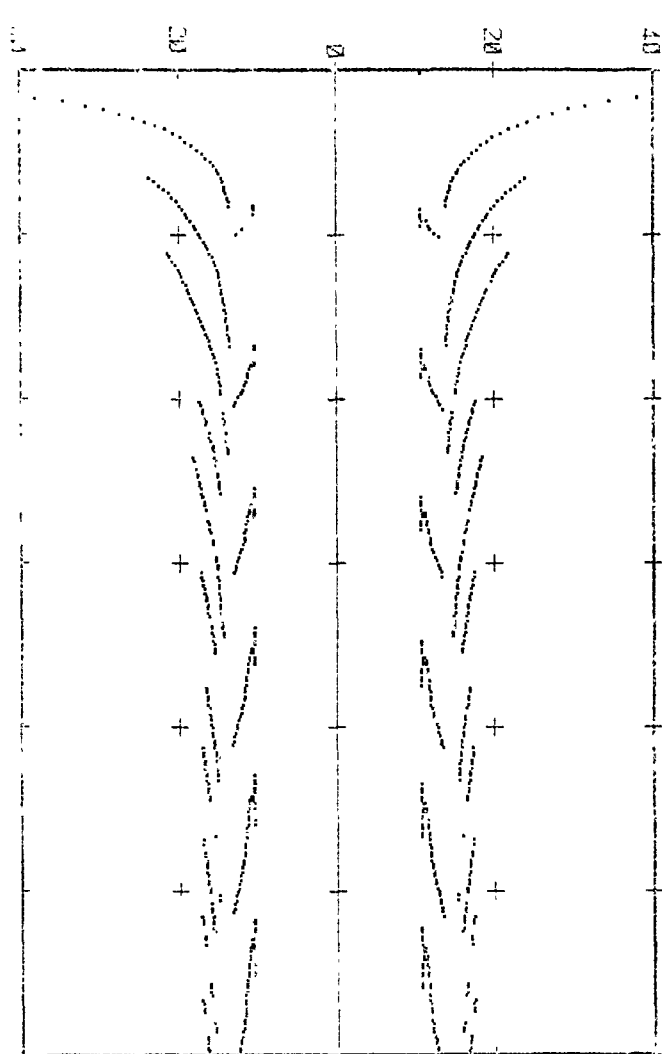
1550

LRAPP

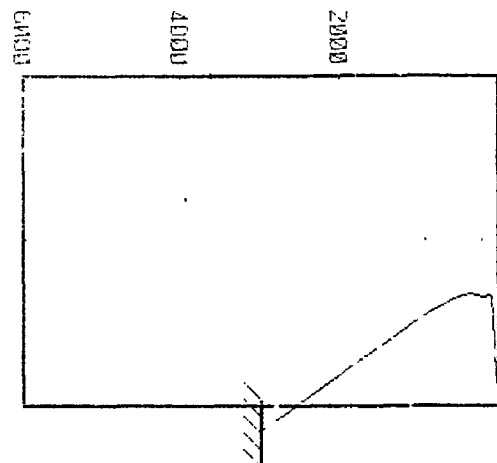
DB LOSS



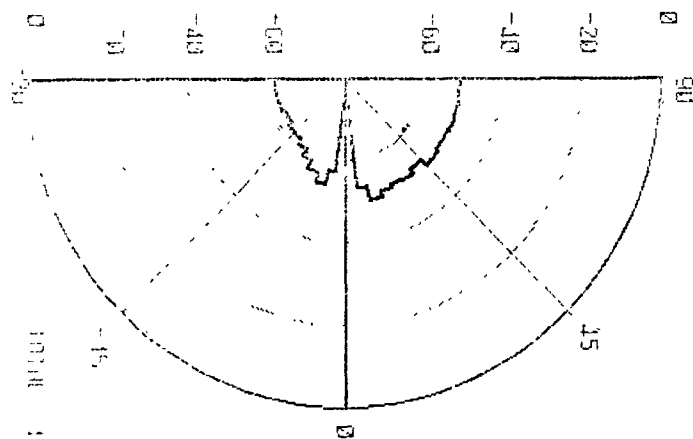
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



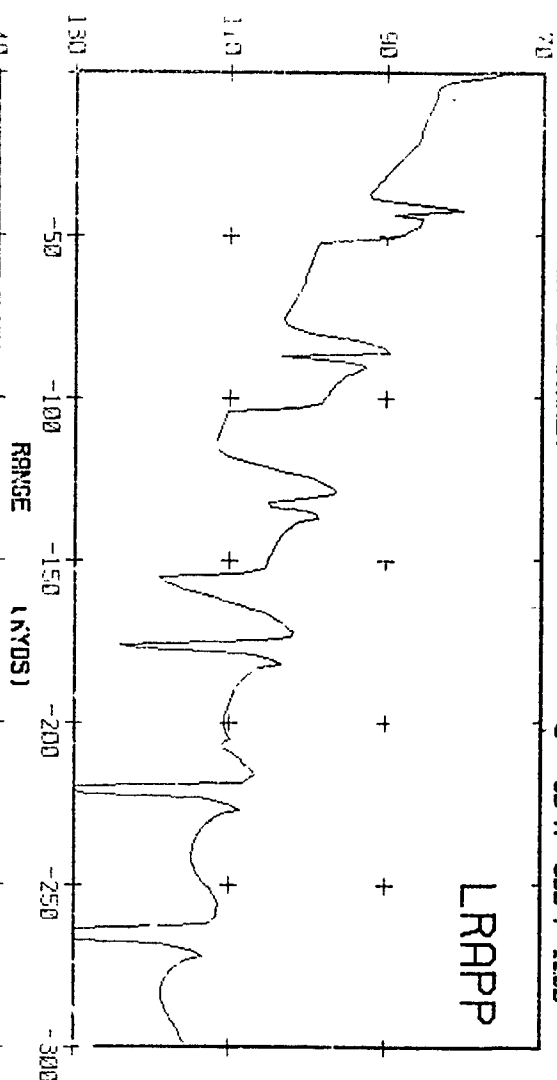


AREA 3B SUMMER

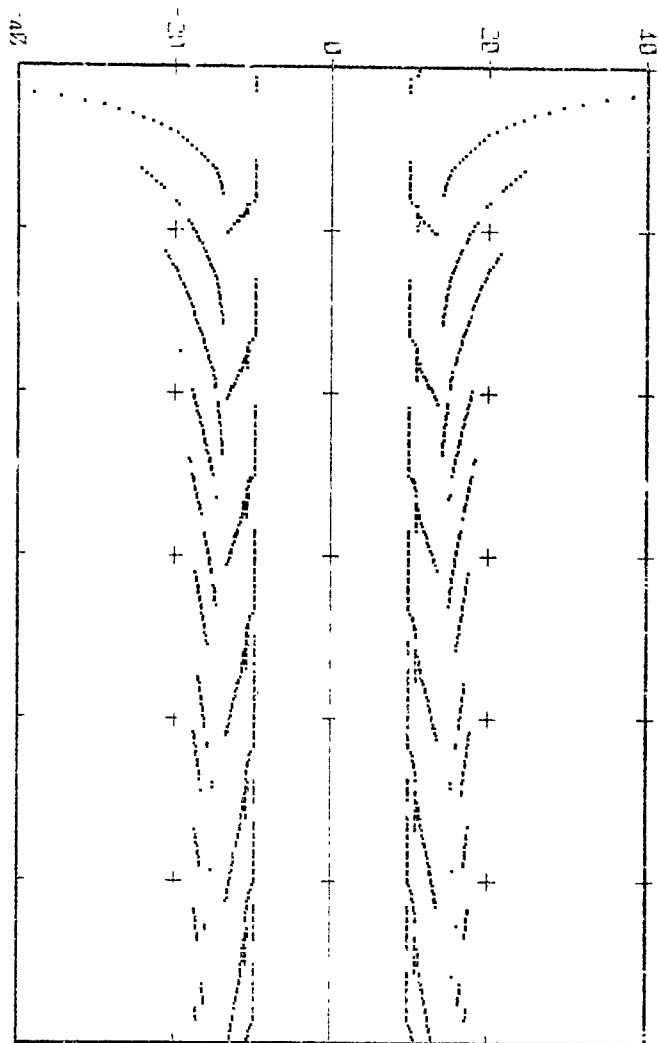
S 50 R 300 F 1200

1450 M/S 1500 1550

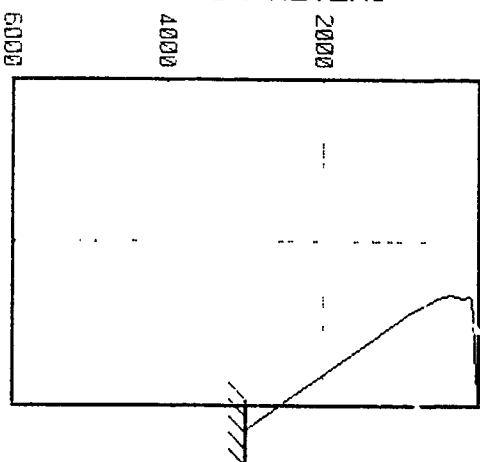
DB LOSS



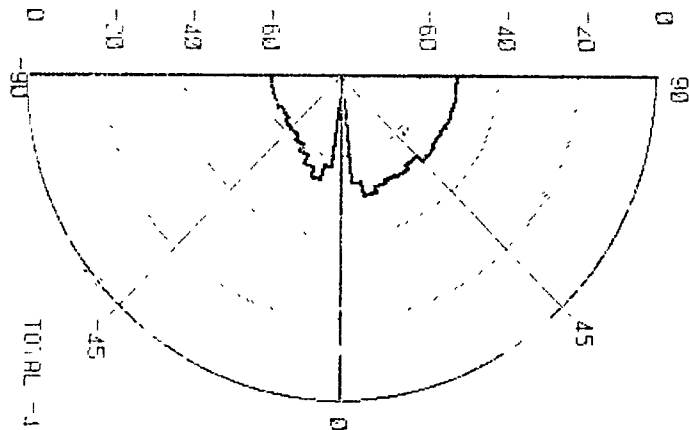
ARRIVAL ANGLE

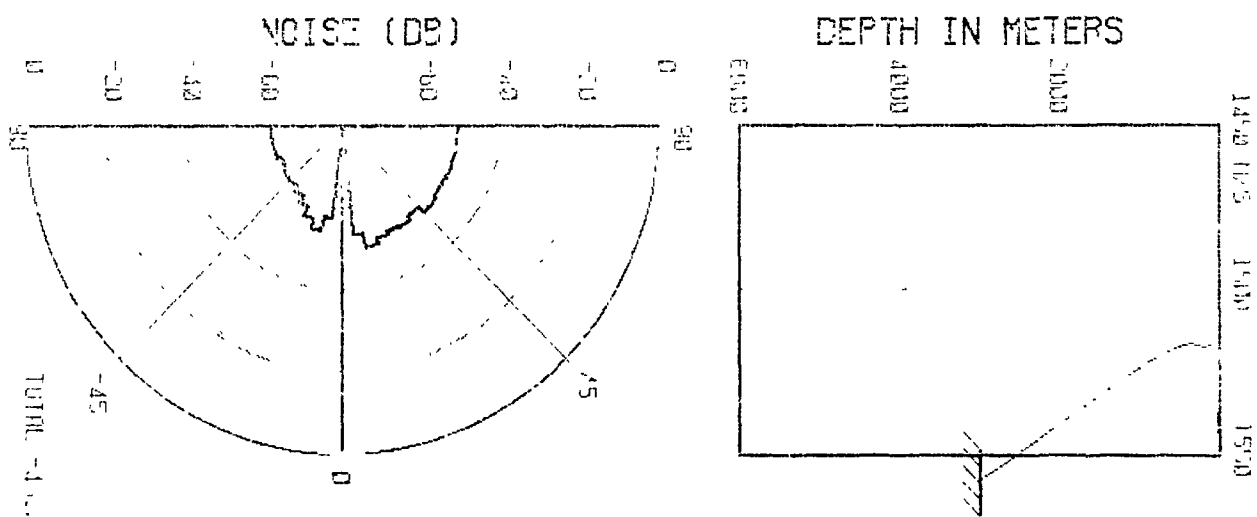
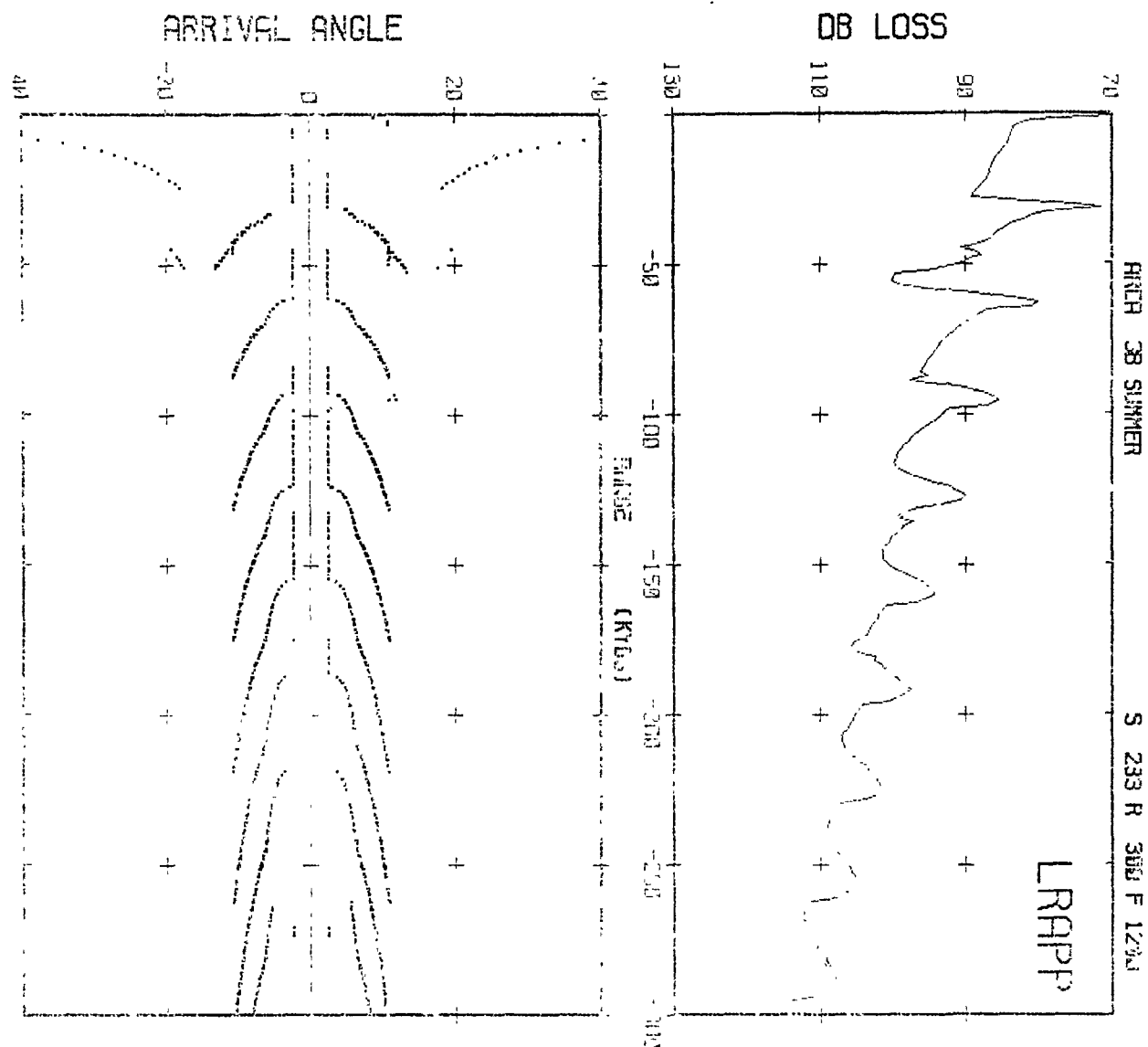


DEPTH IN METERS



NOISE (DB)



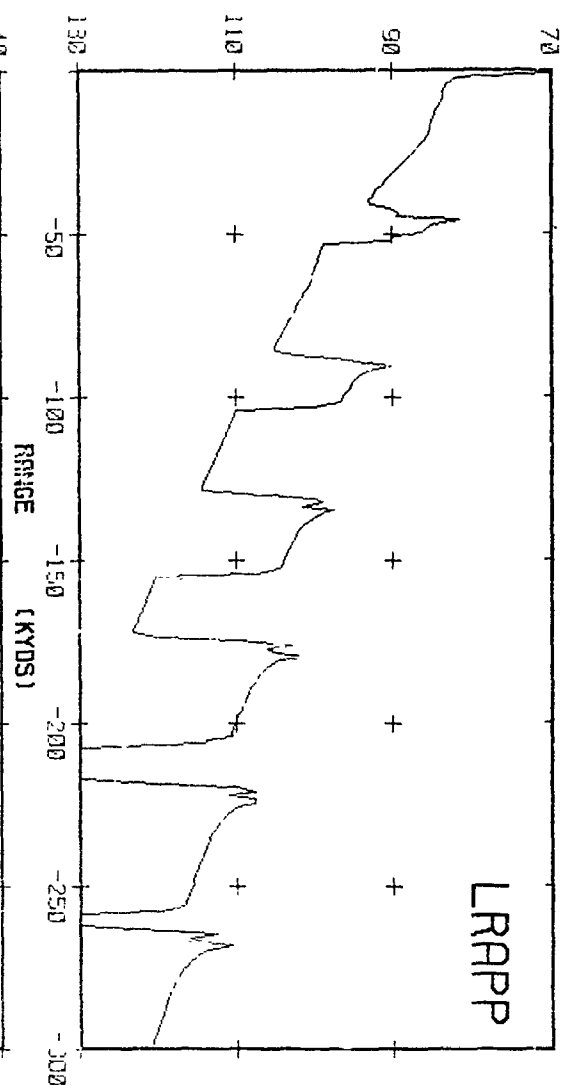


AREA 38 SUMMER

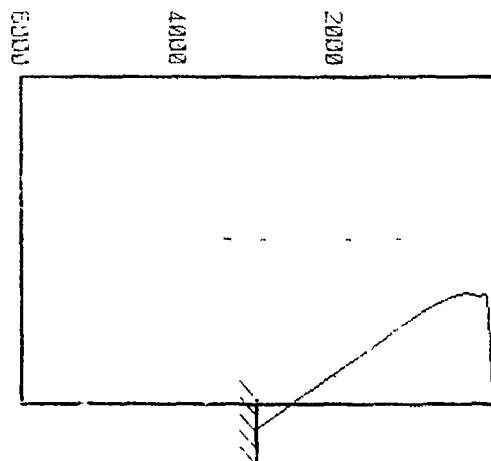
S 20 R 600 F 1200

1450 M/S 1500 1550

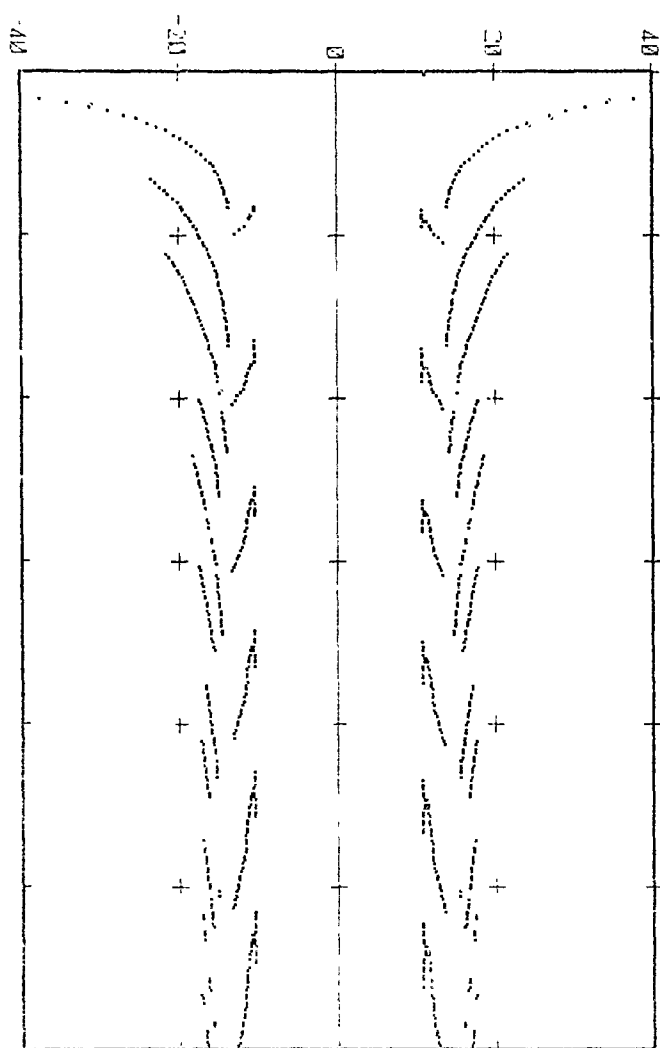
DB LOSS



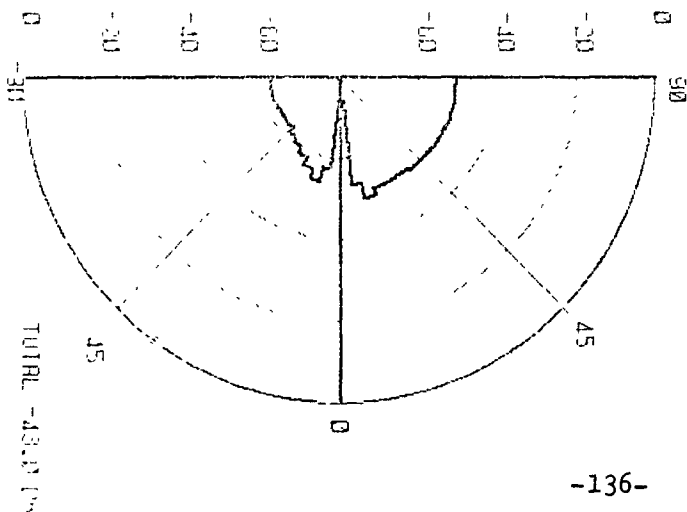
DEPTH IN METERS

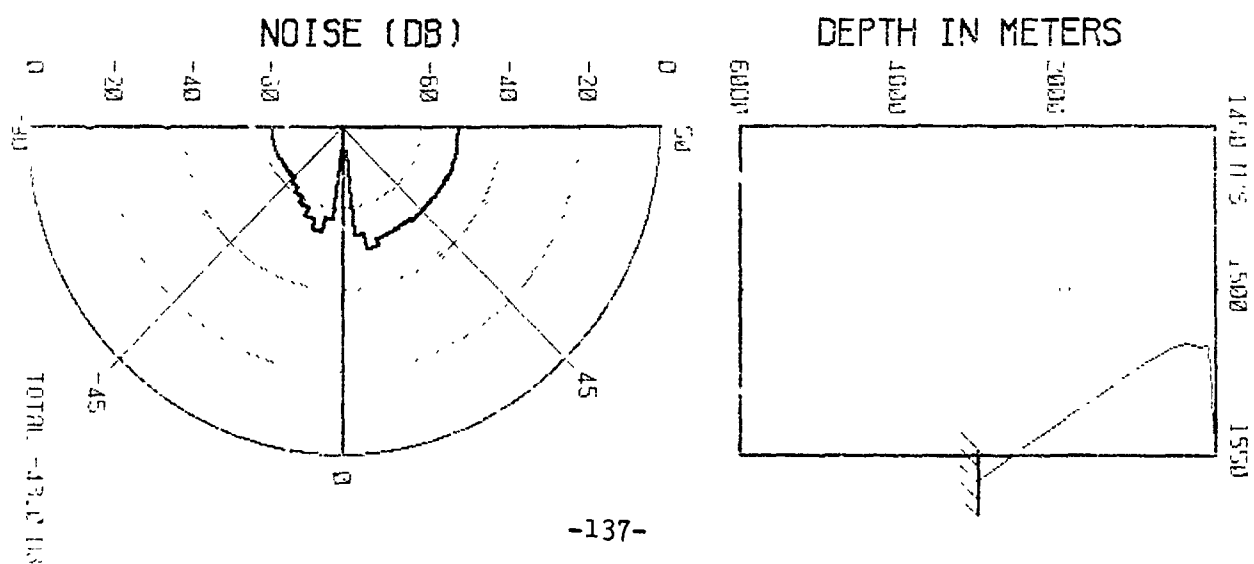
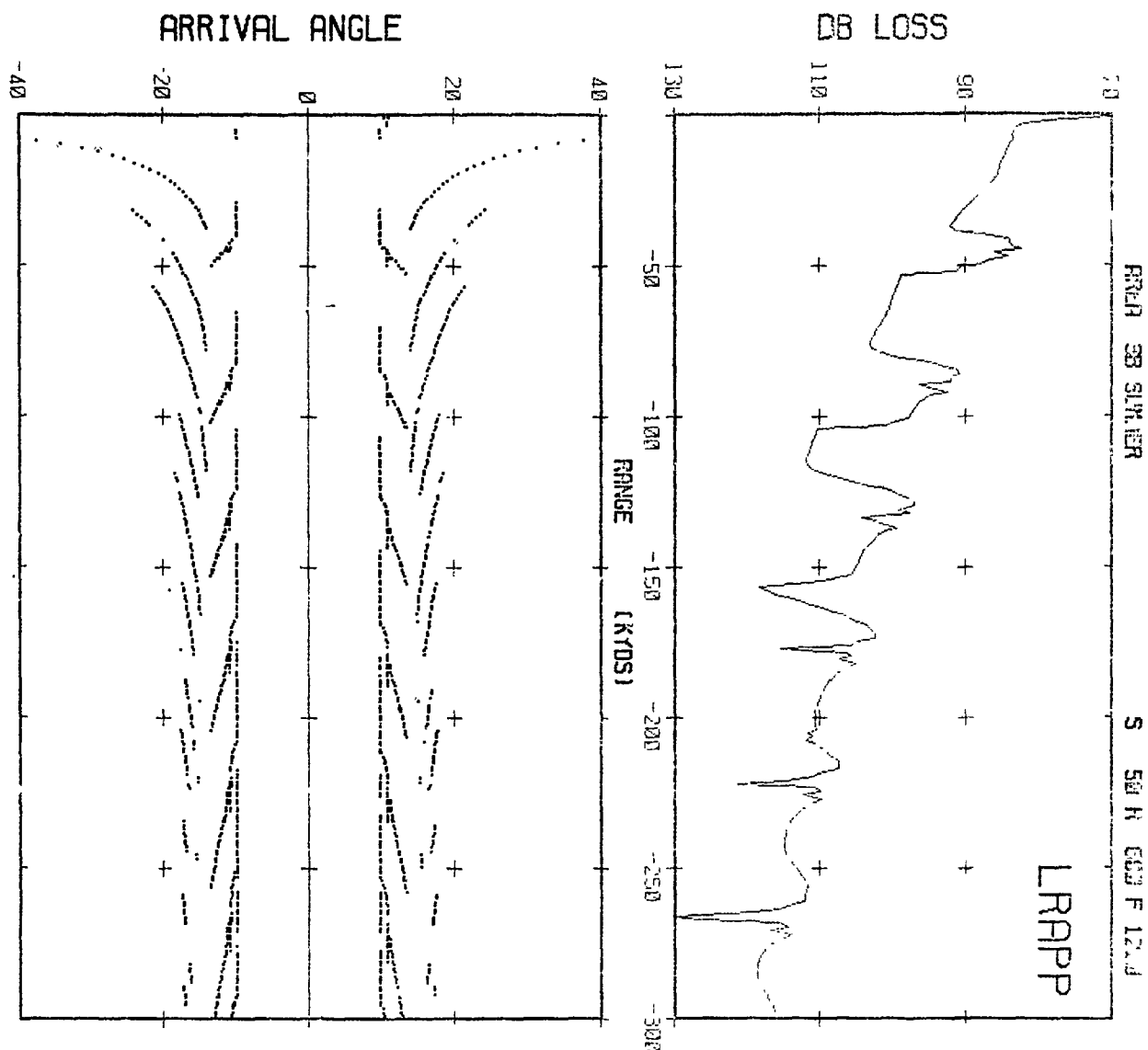


ARRIVAL ANGLE



NOISE (DB)





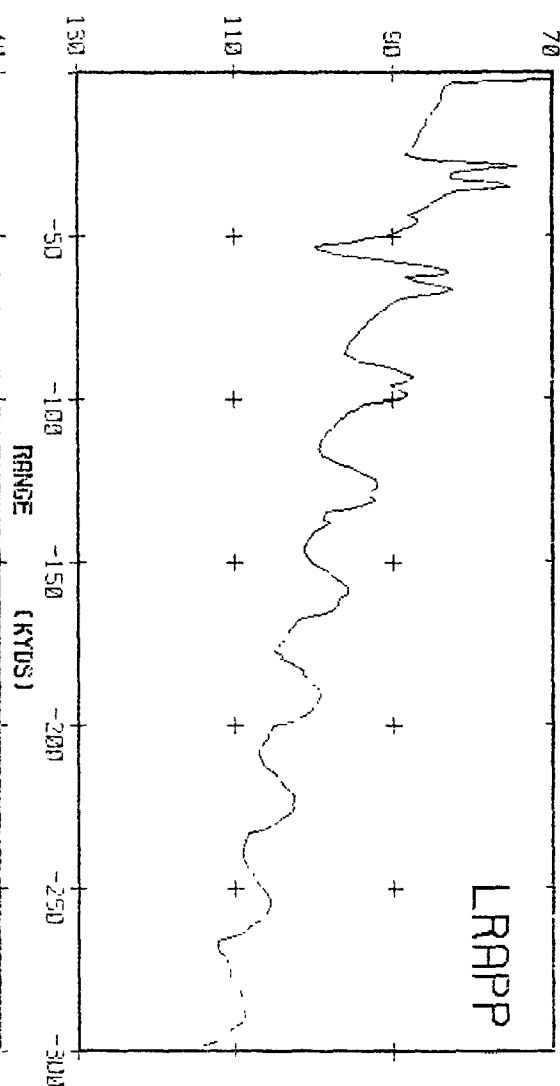
ARRER 38 SUMMER

S 233 R 600 F 1200

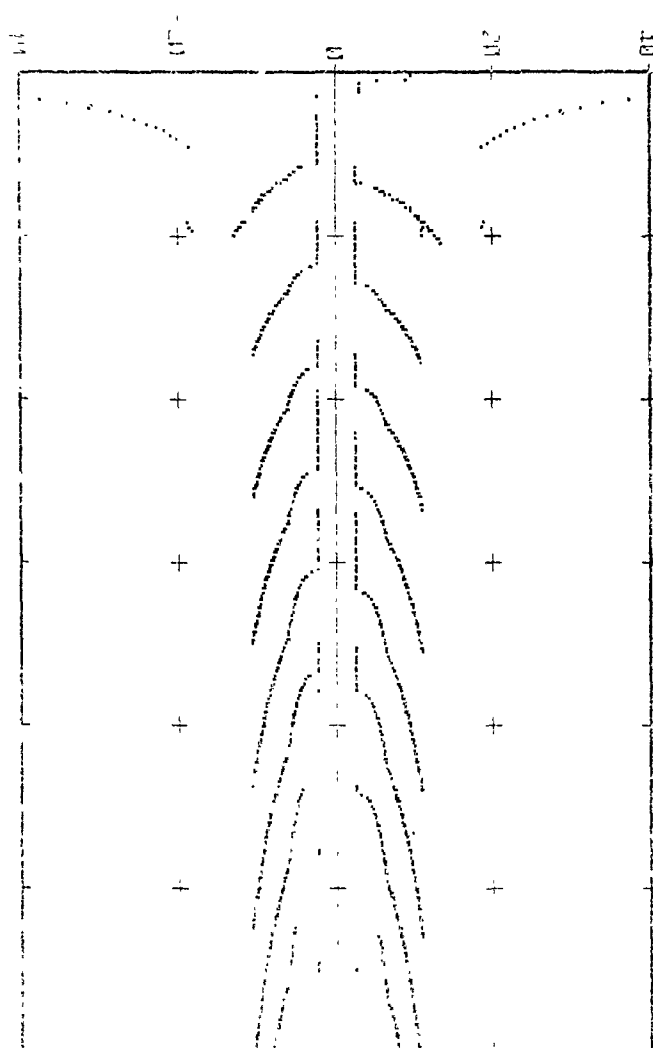
1450 14/5 1500

1550

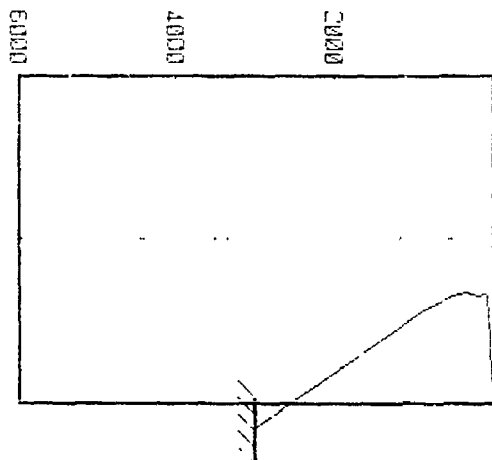
DB LOSS



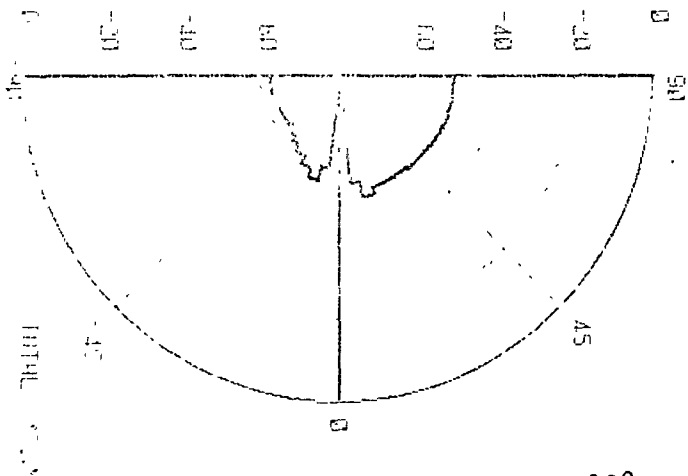
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

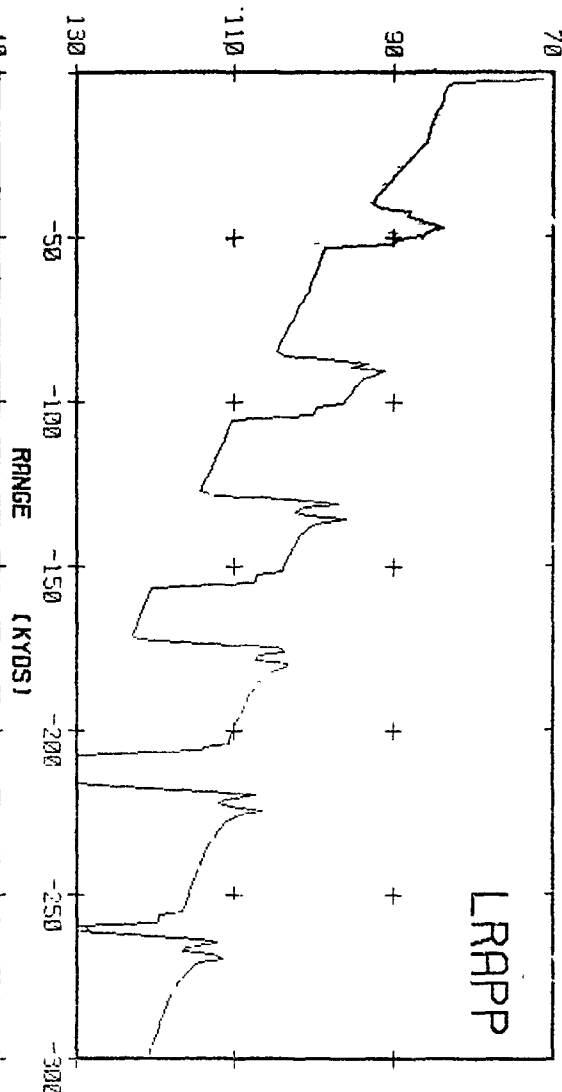


ARCH 38 SUMMER

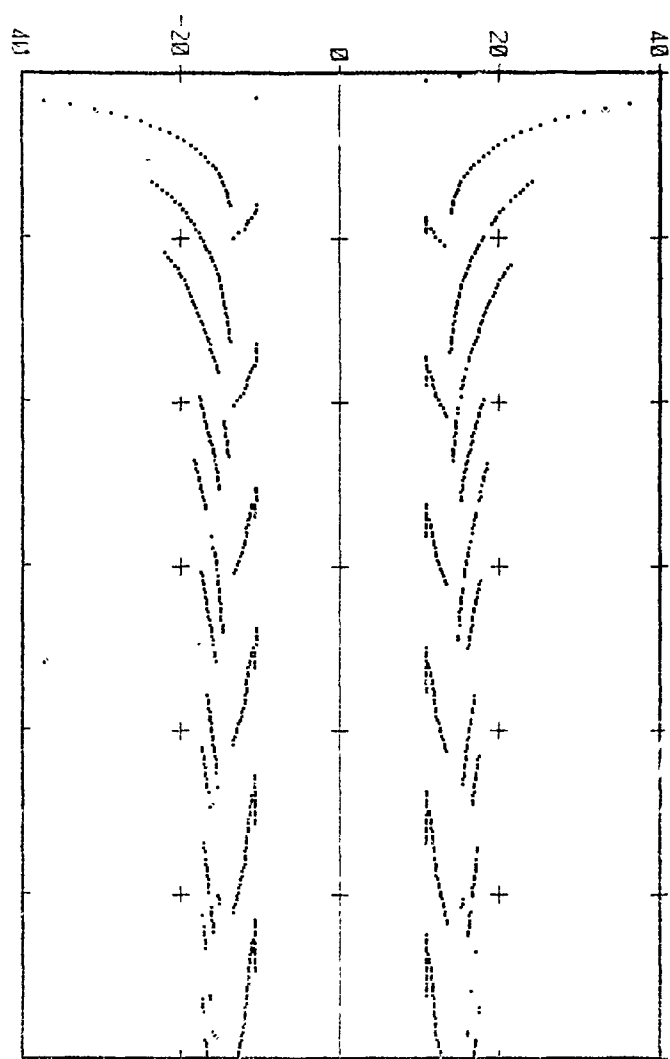
S 20 R 1000 F 1200

LRAPP

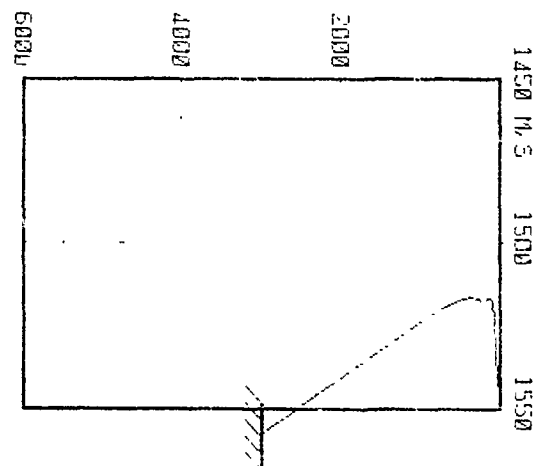
DB LOSS



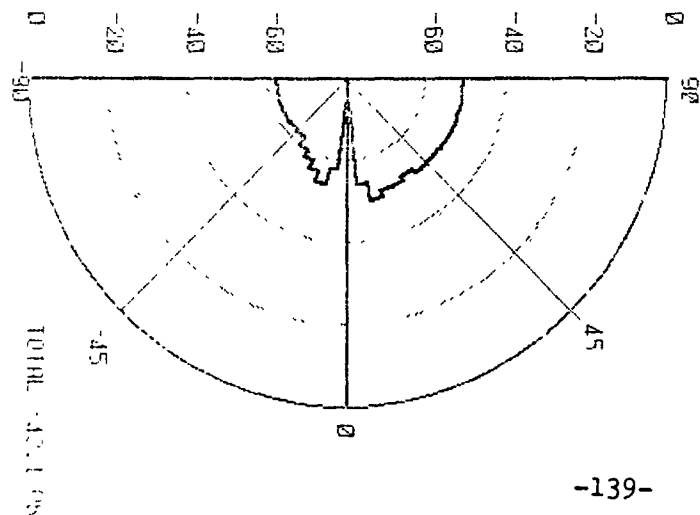
ARRIVAL ANGLE

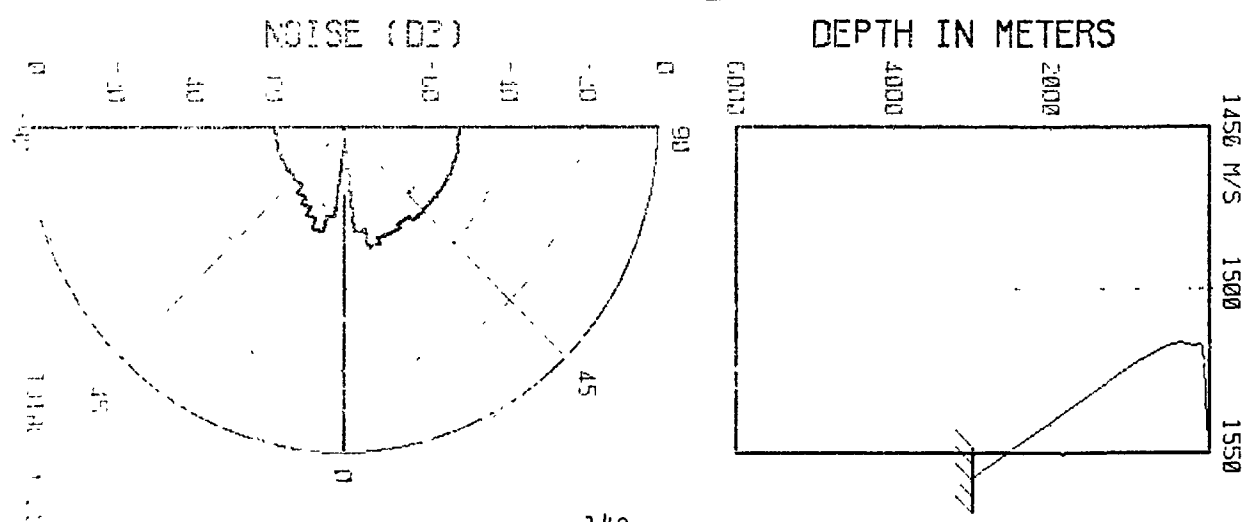
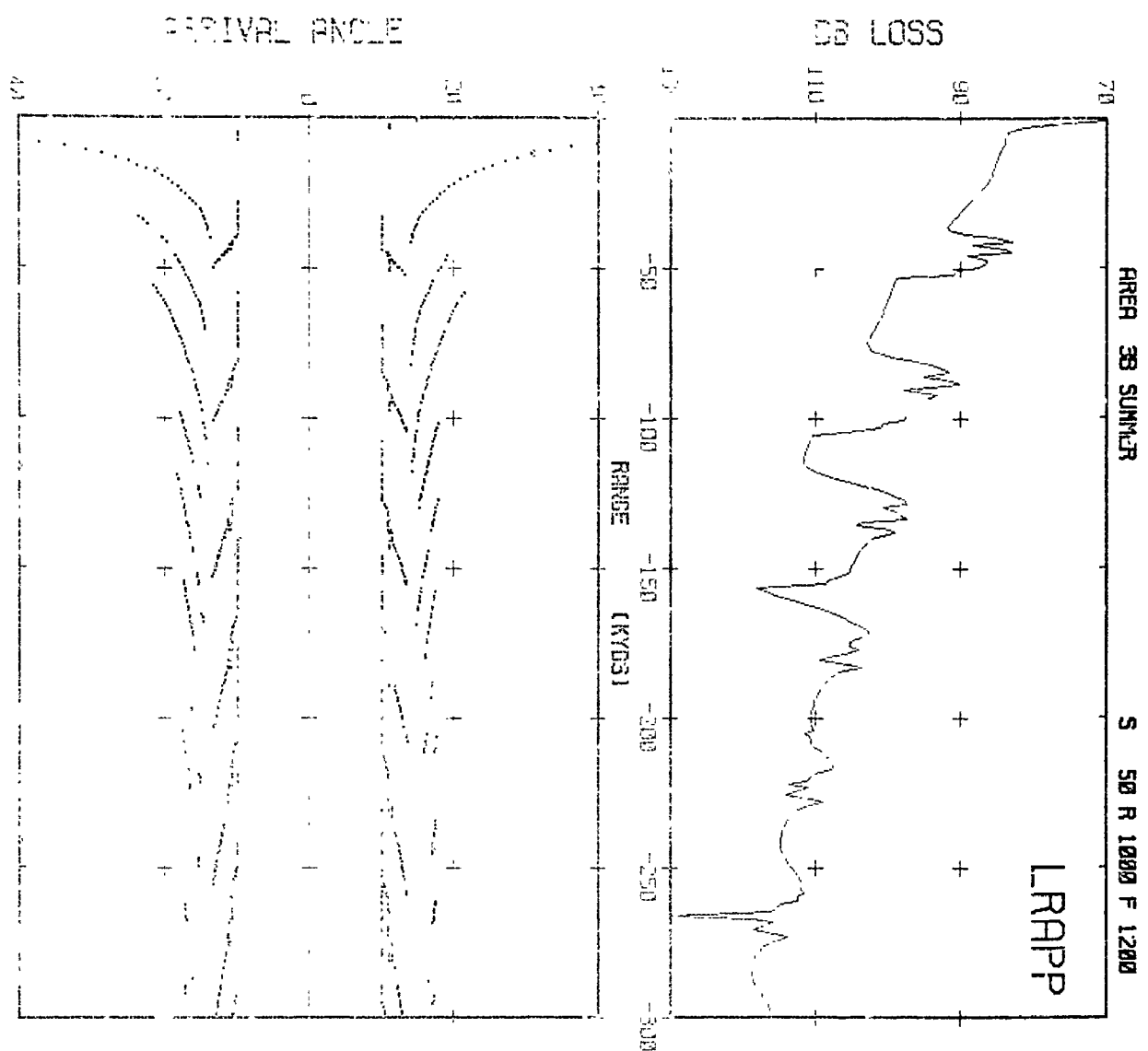


DEPTH IN METERS



NOISE (DB)



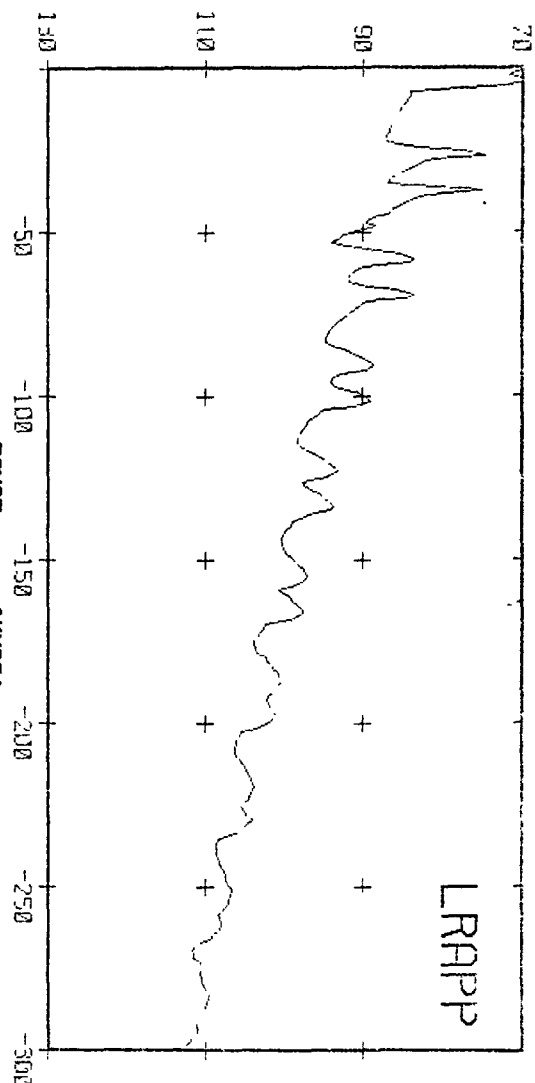


AREA 38 SUMMER

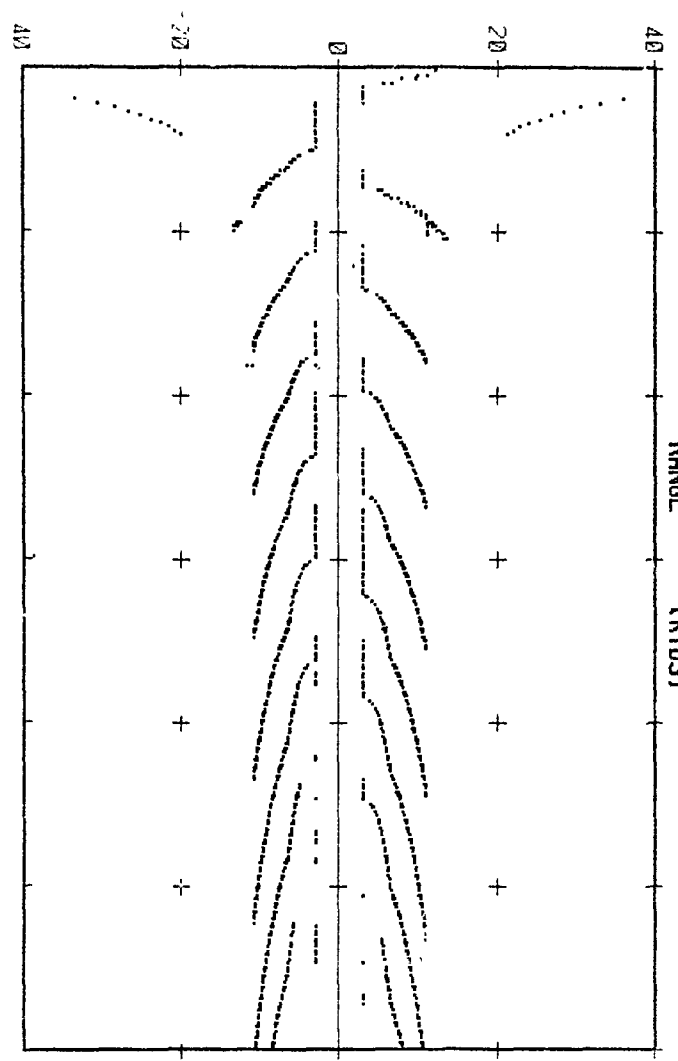
S 233 R 1500 F 1260

LRAPP

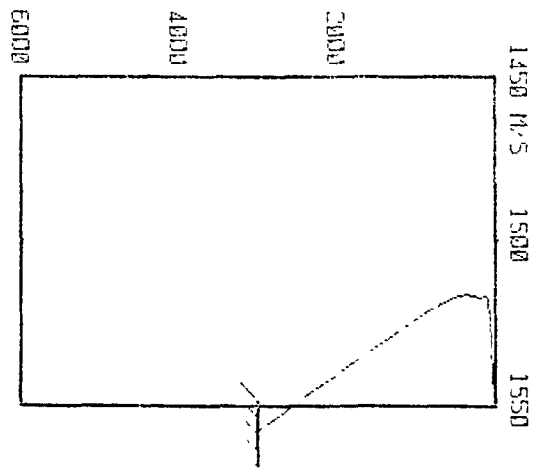
DB LOSS



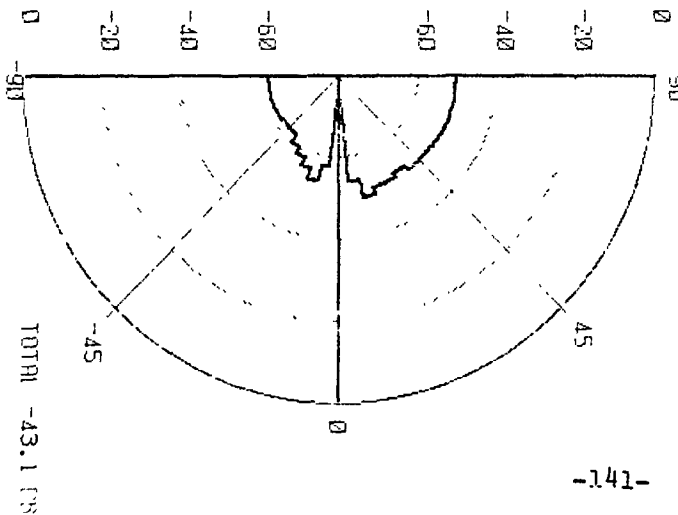
ARRIVAL ANGLE



DEPTH IN METERS

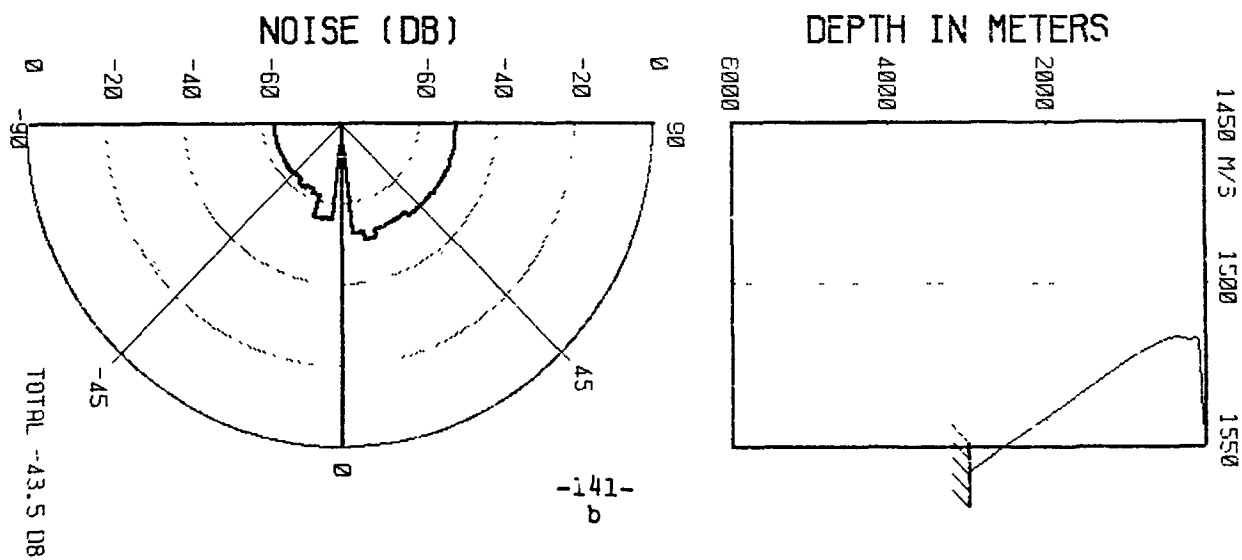
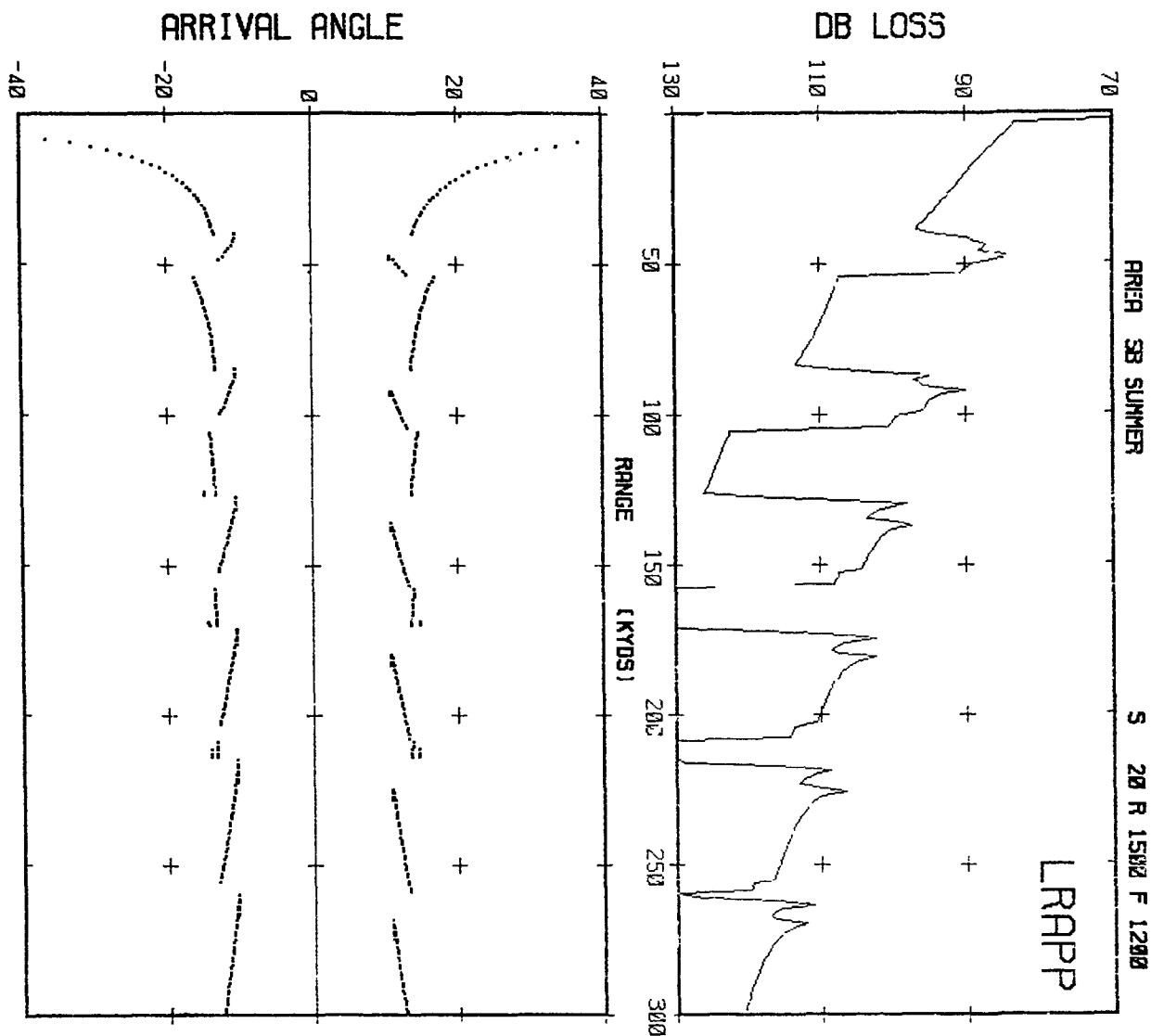


NOISE (DB)





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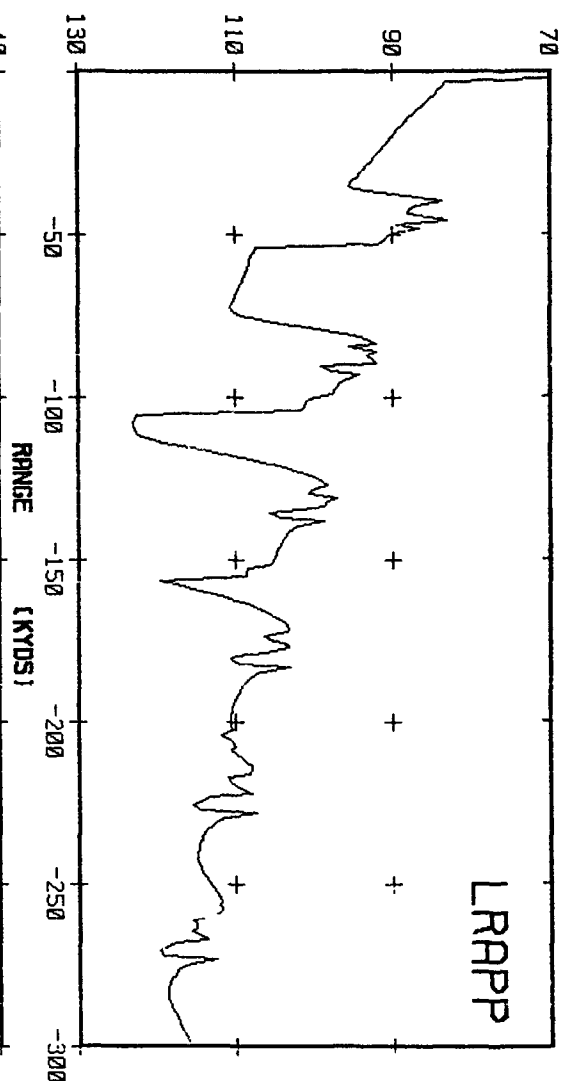
AREA 38 SUMMER

S 50 R 1500 F 1200

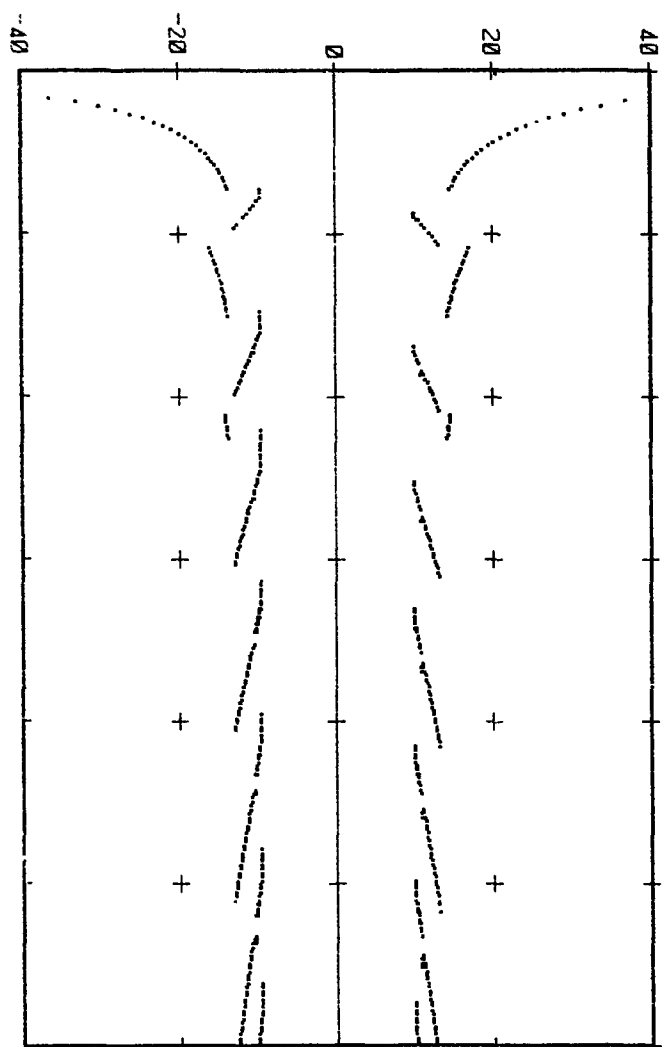
1450 M/S 1500

1550

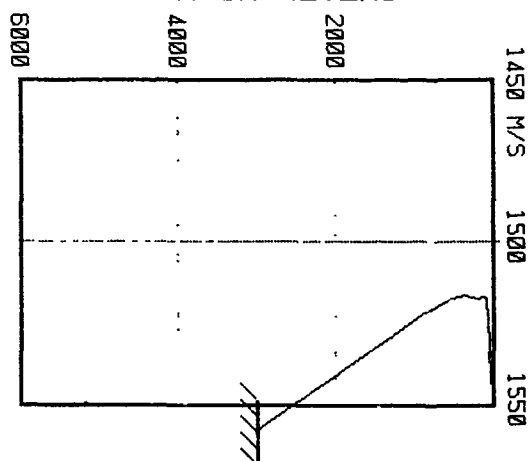
DB LOSS



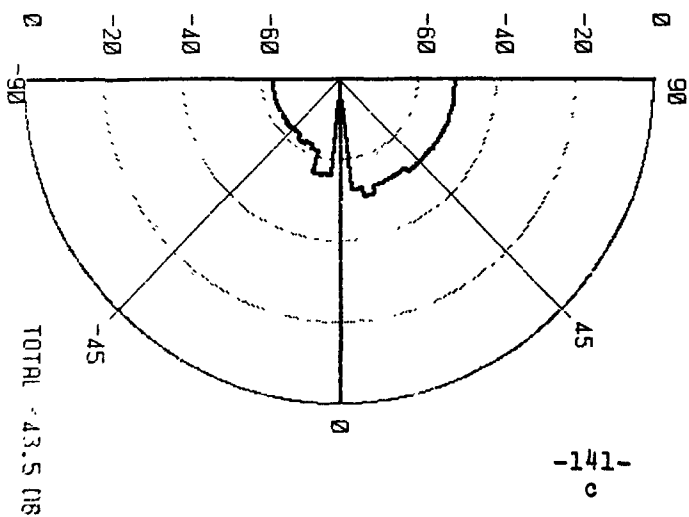
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



-141-

ARRR 38 SUMMER

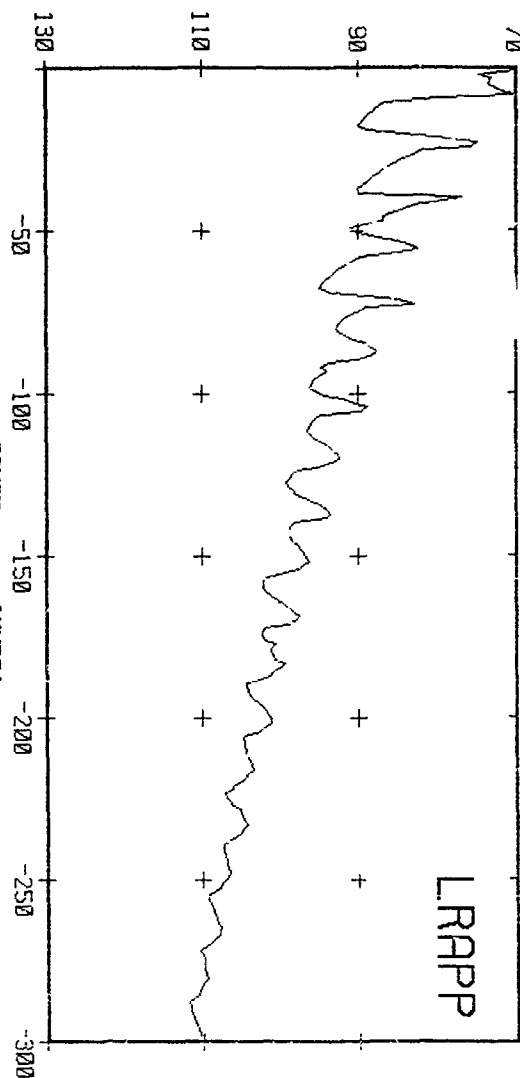
S 233 R 1500 F 1290

1450 M/S

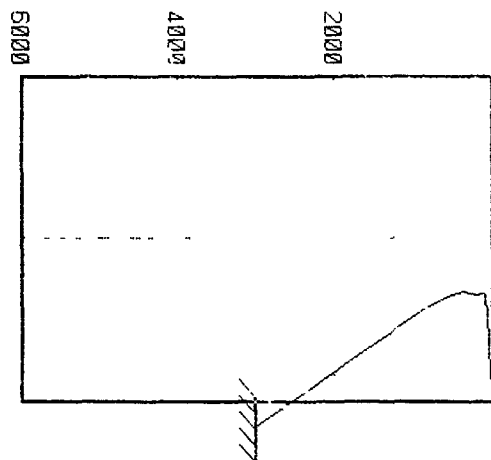
1500

1550

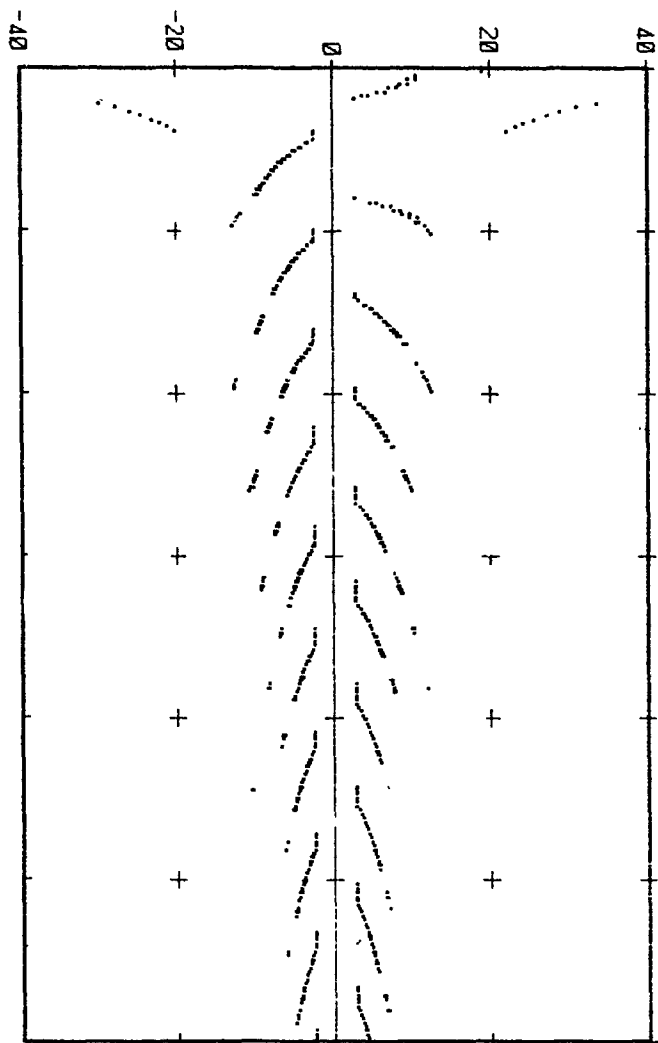
DB LOSS



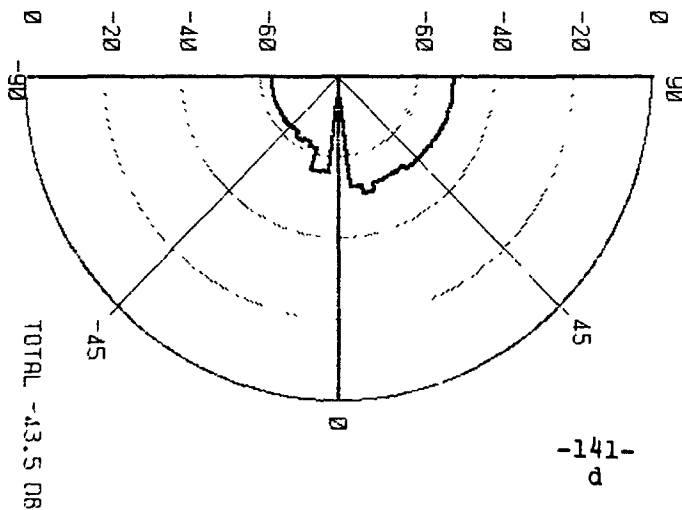
DEPTH IN METERS



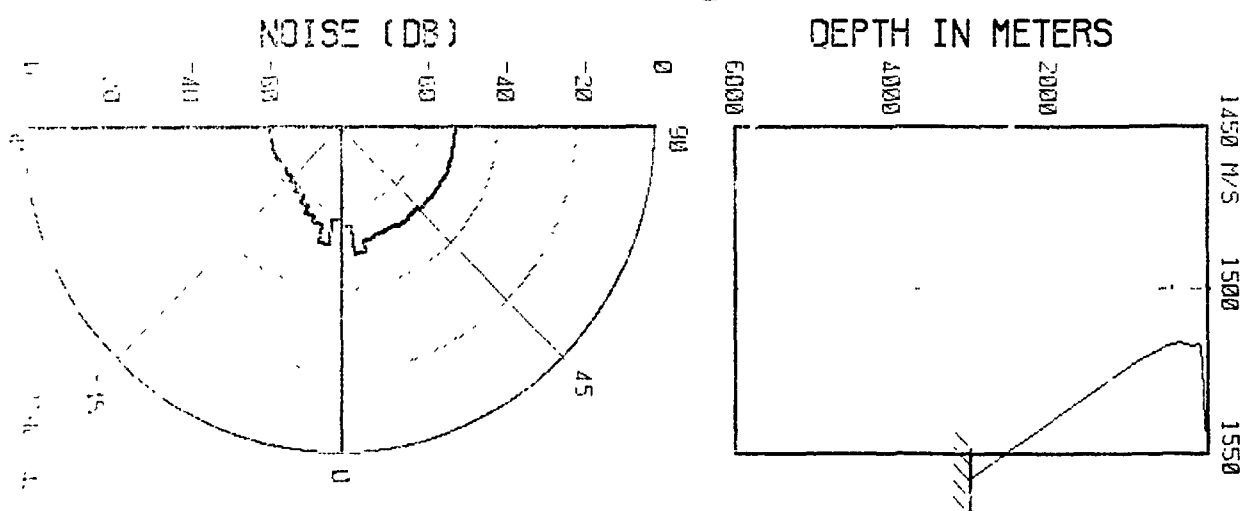
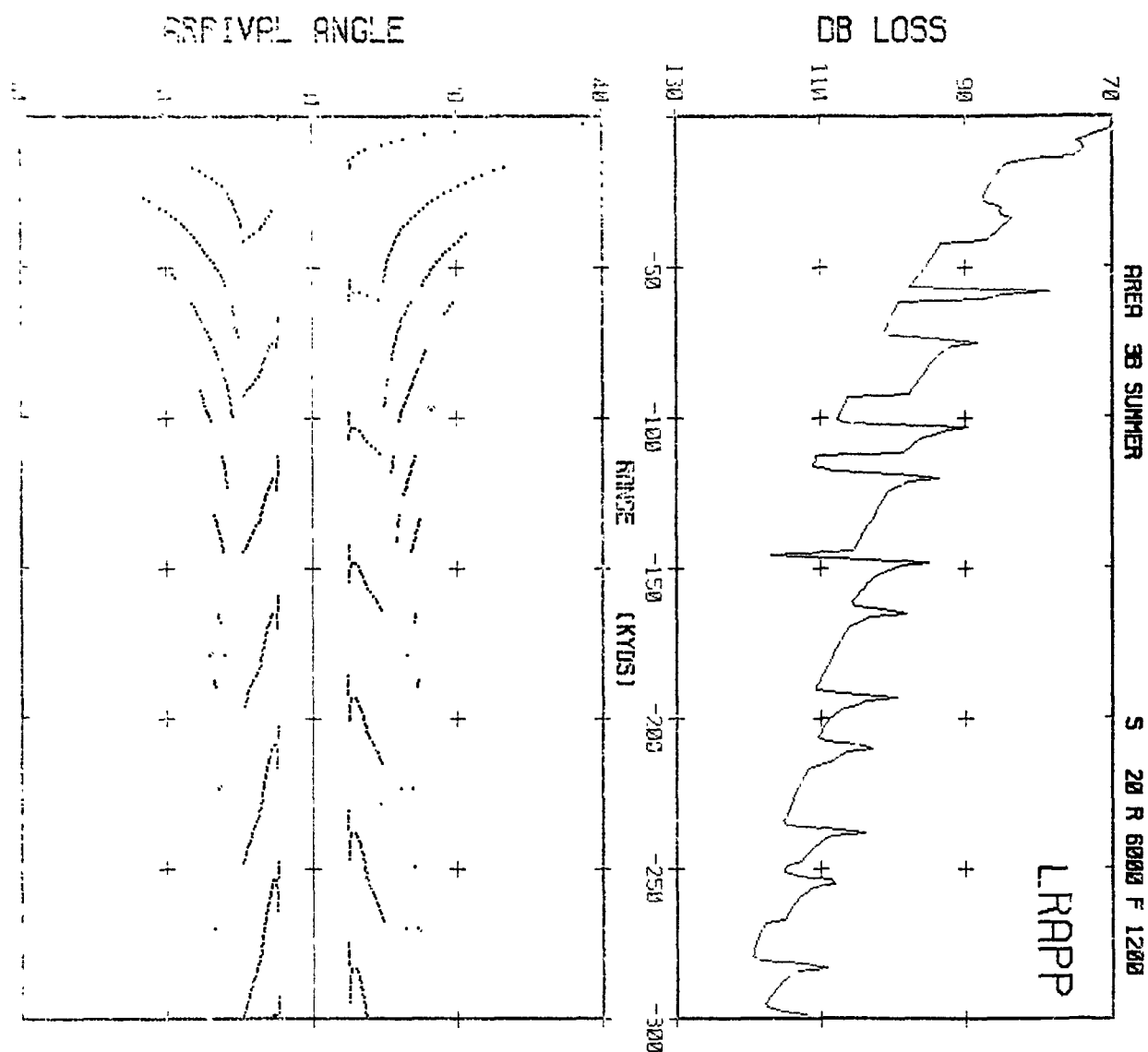
ARRIVAL ANGLE



NOISE (DB)



-141-  
a

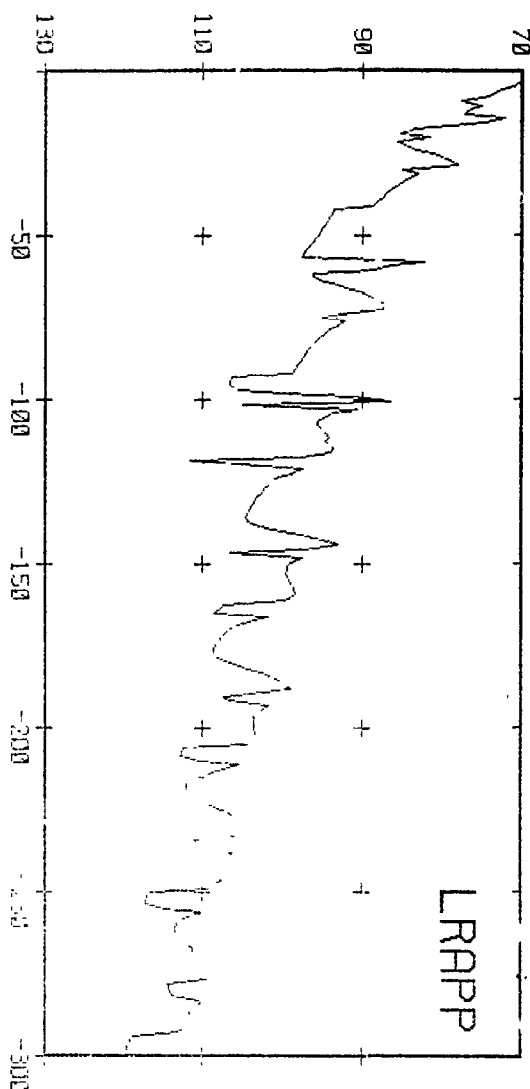


PIPER 38 SUMNER

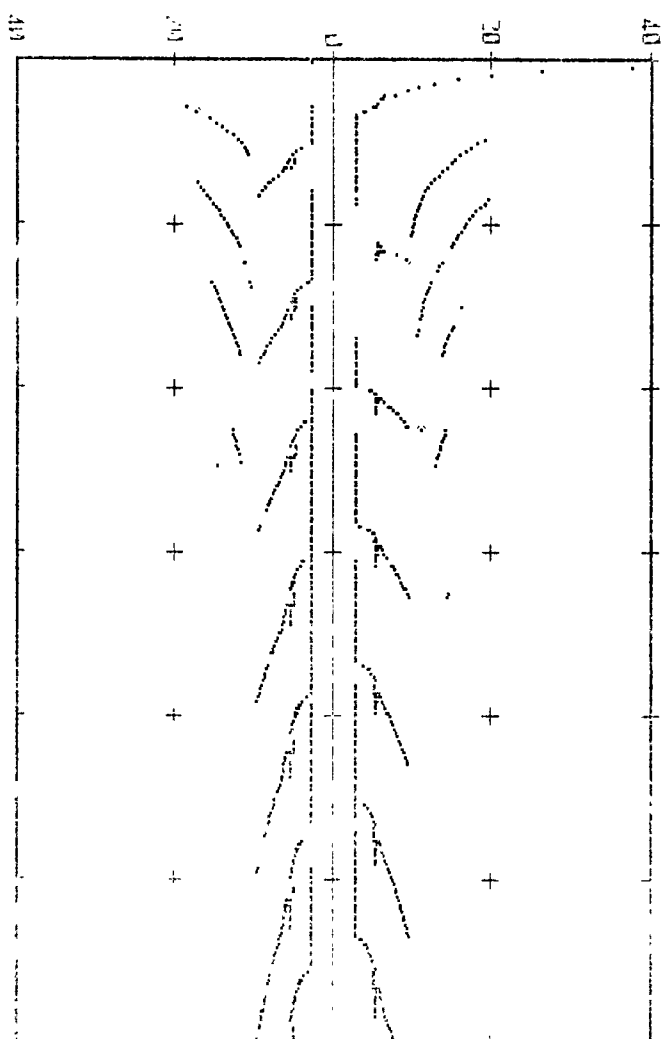
S 50 R 6800 F 1250

1450 11/5 1500 1530

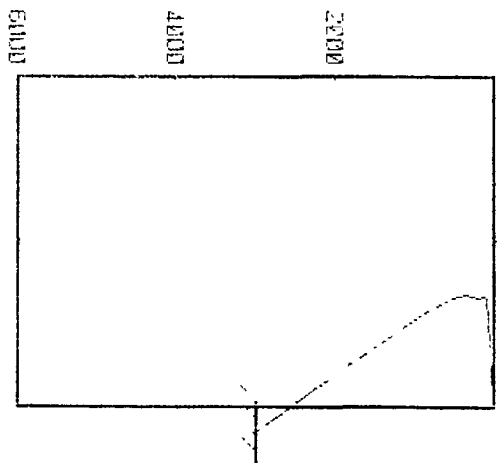
DB LOSS



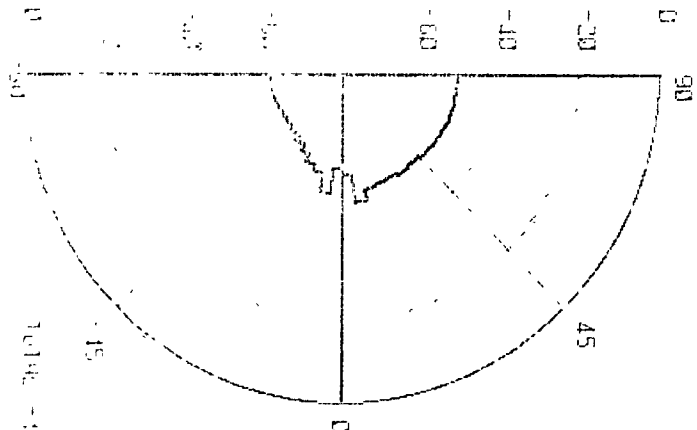
ARRIVAL ANGLE



DEPTH IN METERS

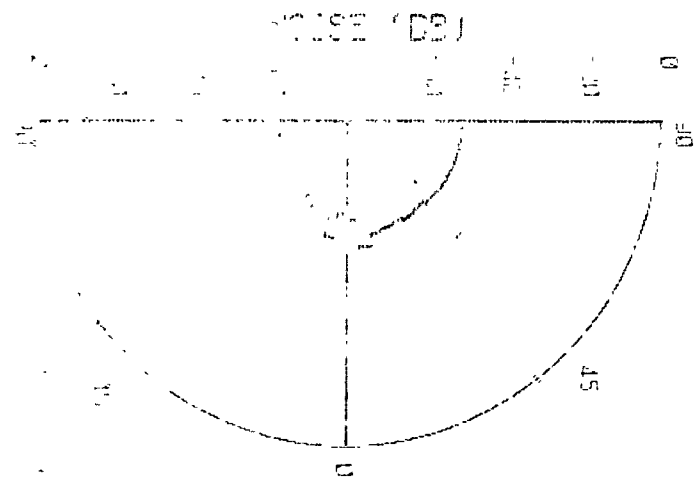
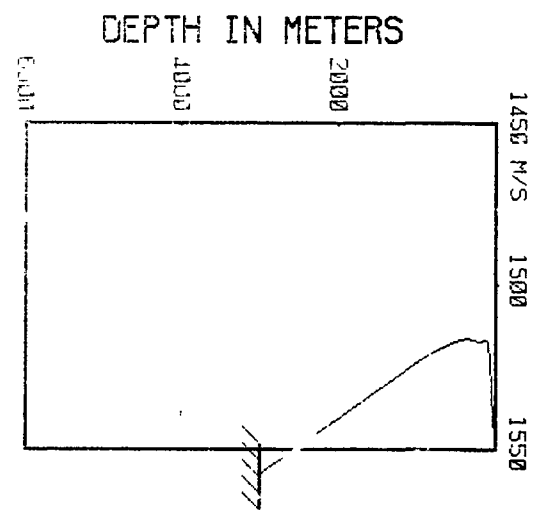
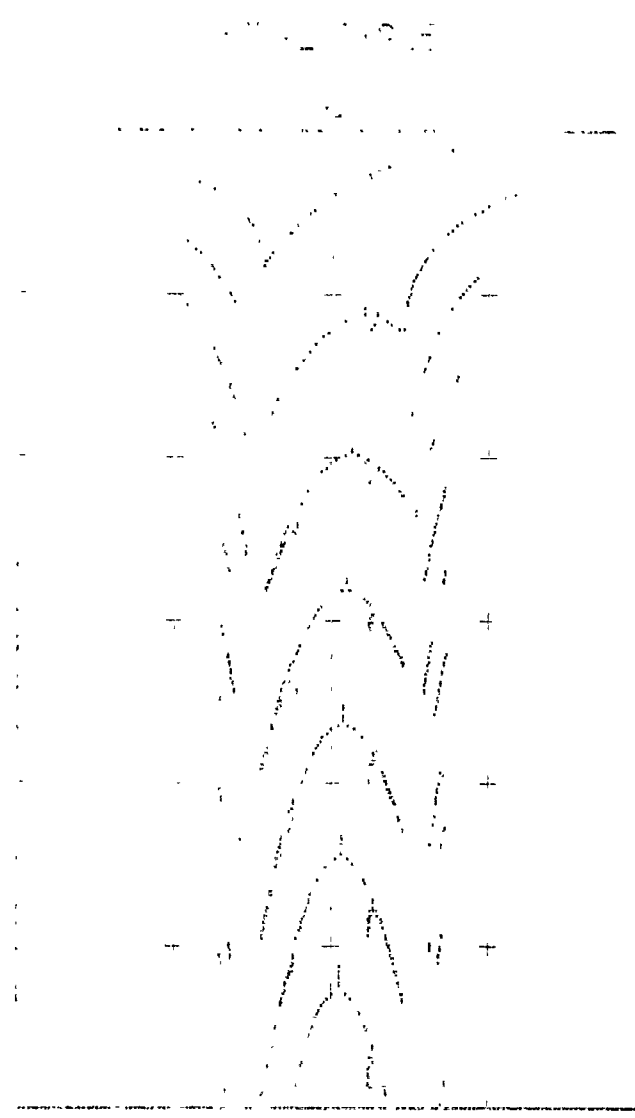
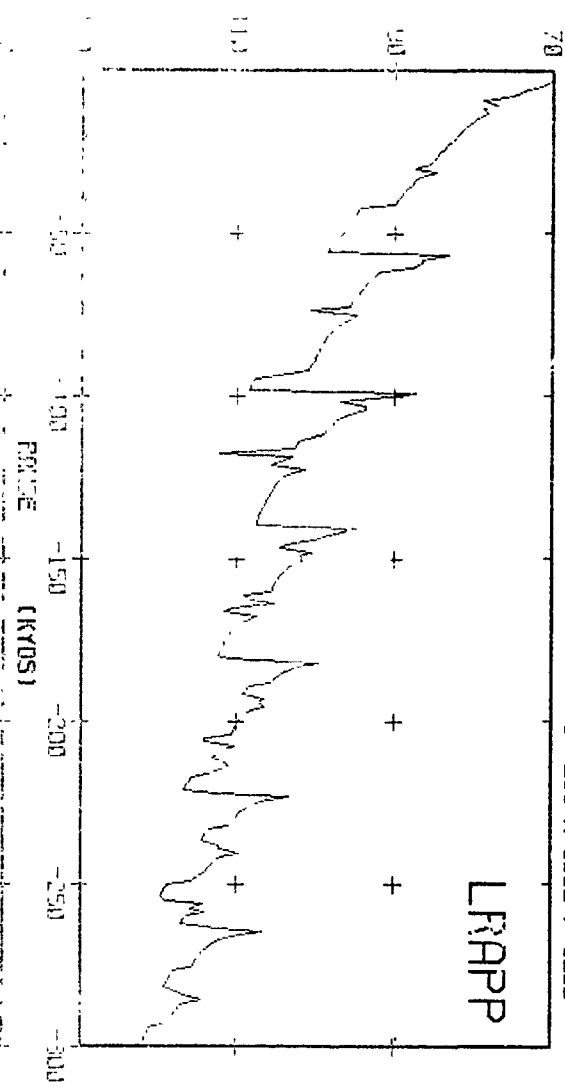


NOISE (DB)



55 1035

AREA 37 SUMMER S 233 R 6000 F 1200

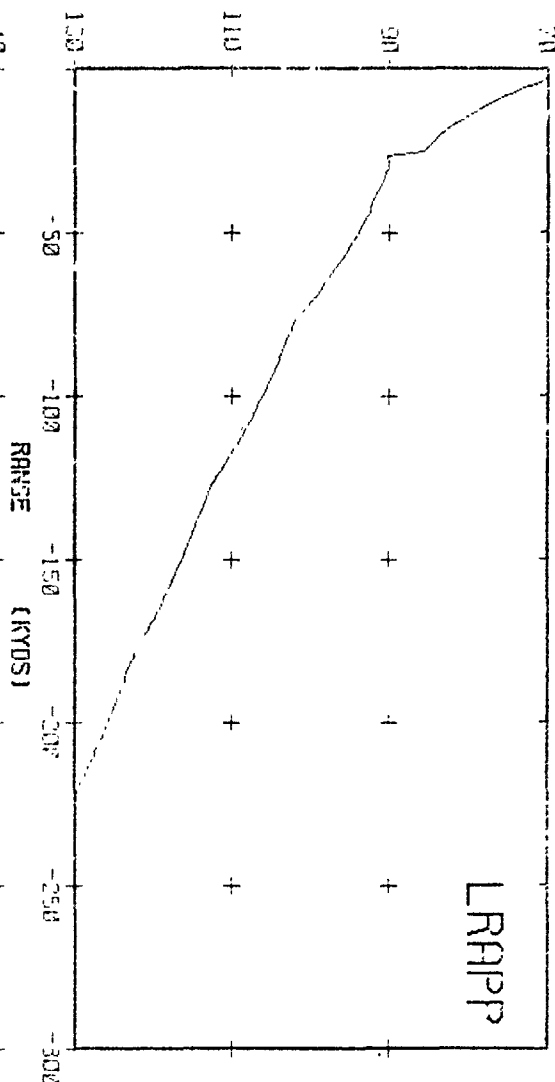


MSS FROM SB SUMMER

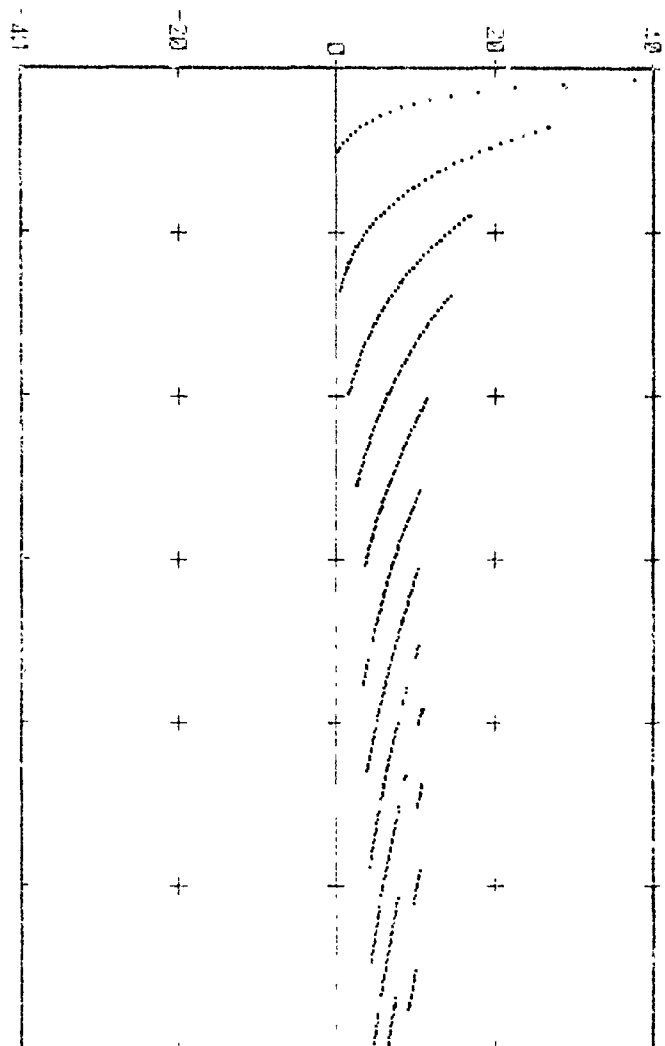
S 28 R 9342 F 1200

1450 1475 1500 1550

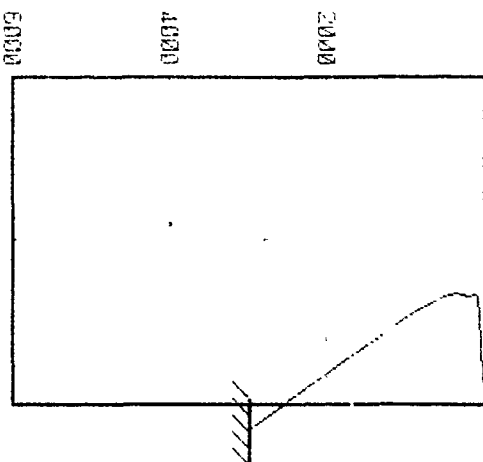
DB LOSS



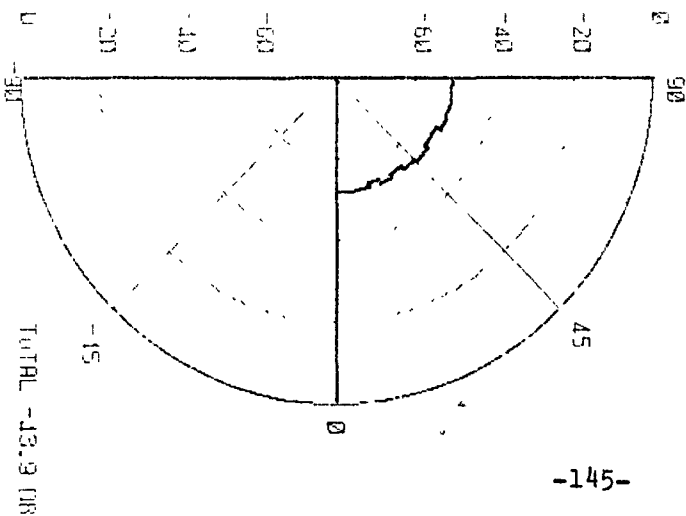
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



ARRR 3B SUMMER

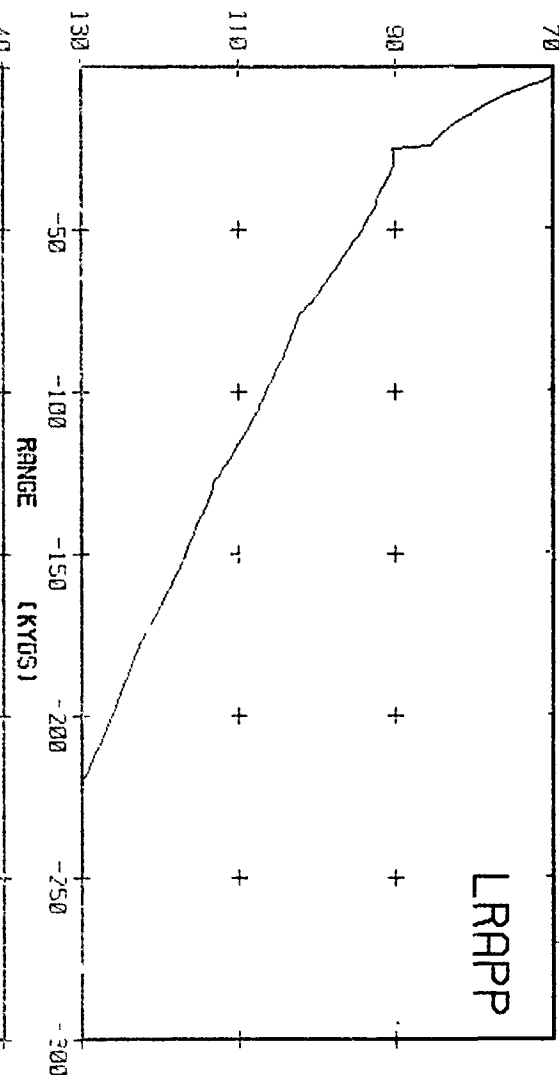
S 50 R 9842 F 1200

1450 M/S

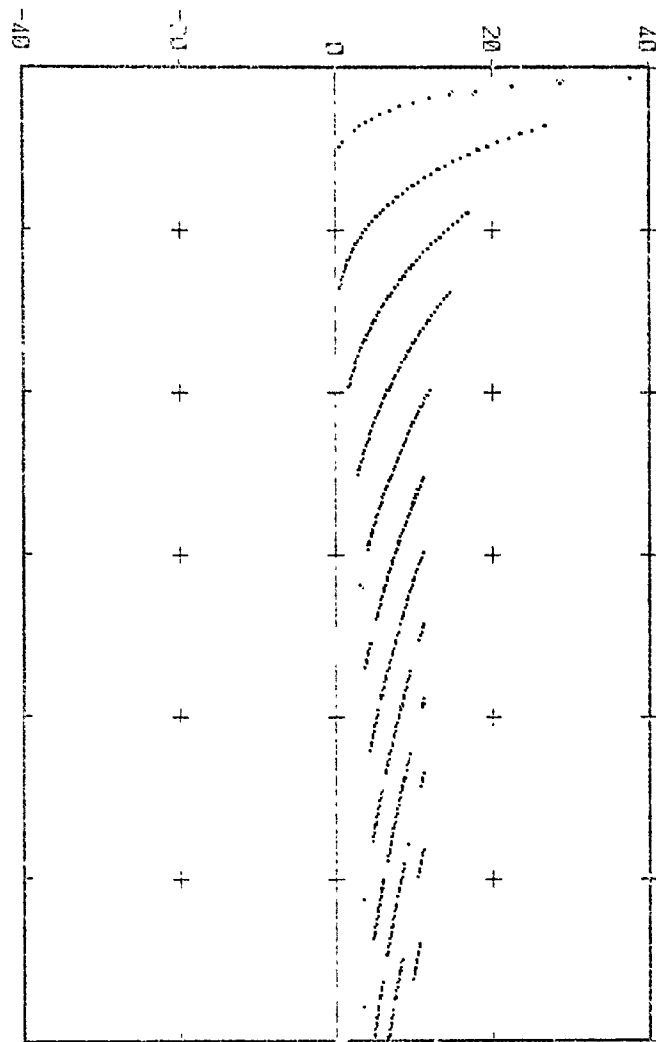
1500

1550

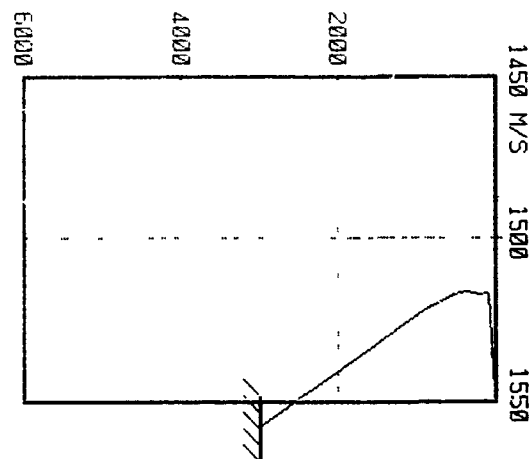
DB LOSS



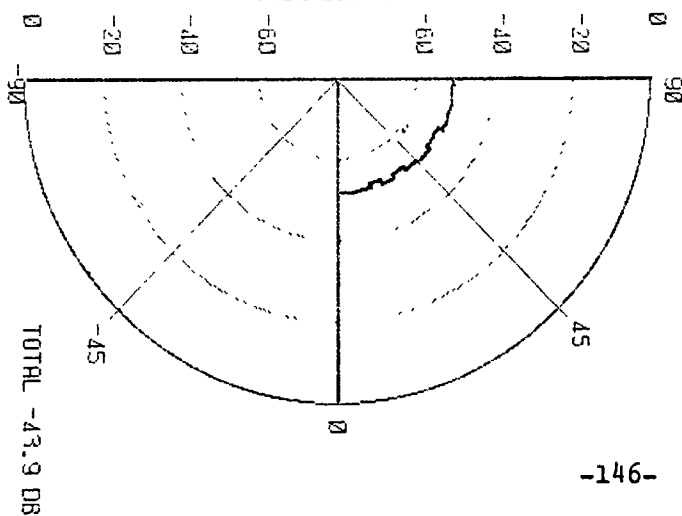
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)





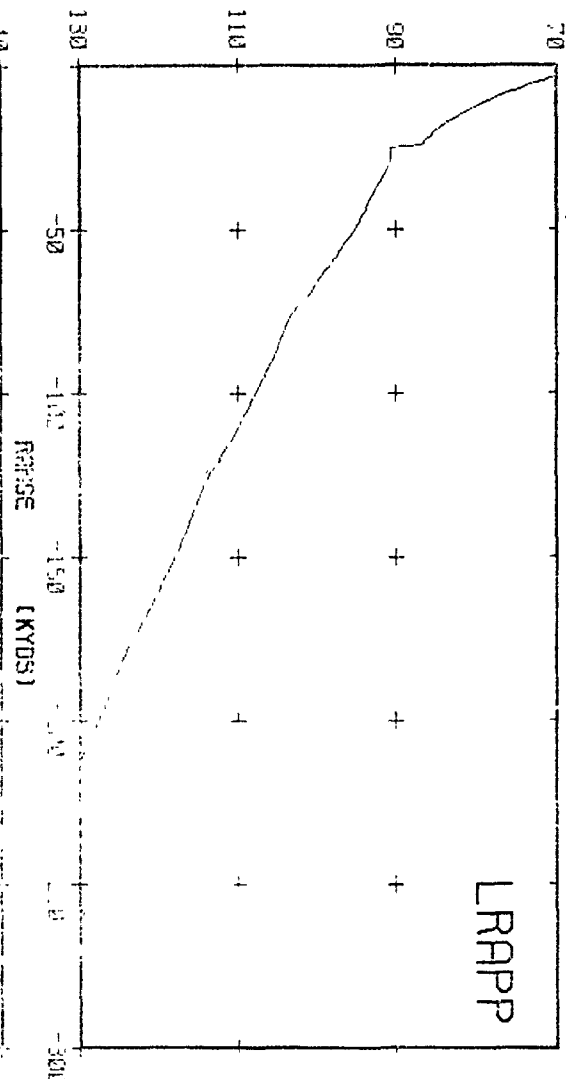
AREA 38 SUMMER

S 233 R 9842 F 1200

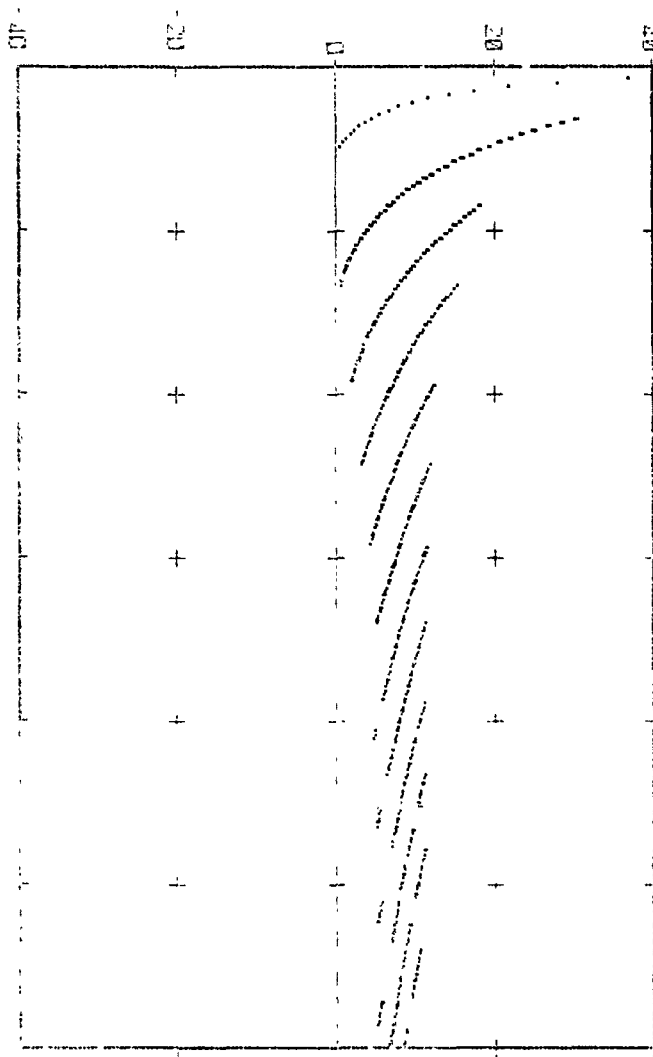
1450 11/5 1500 1550

LRAPP

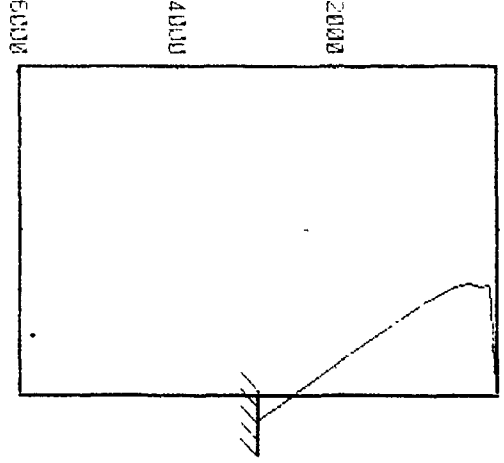
DB LOSS



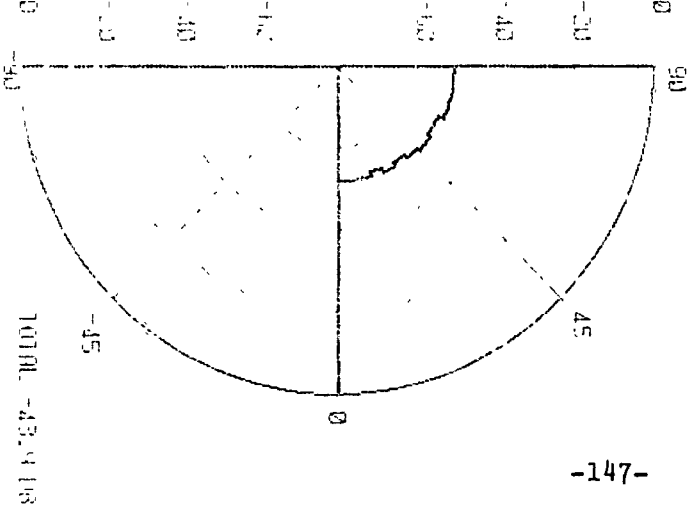
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

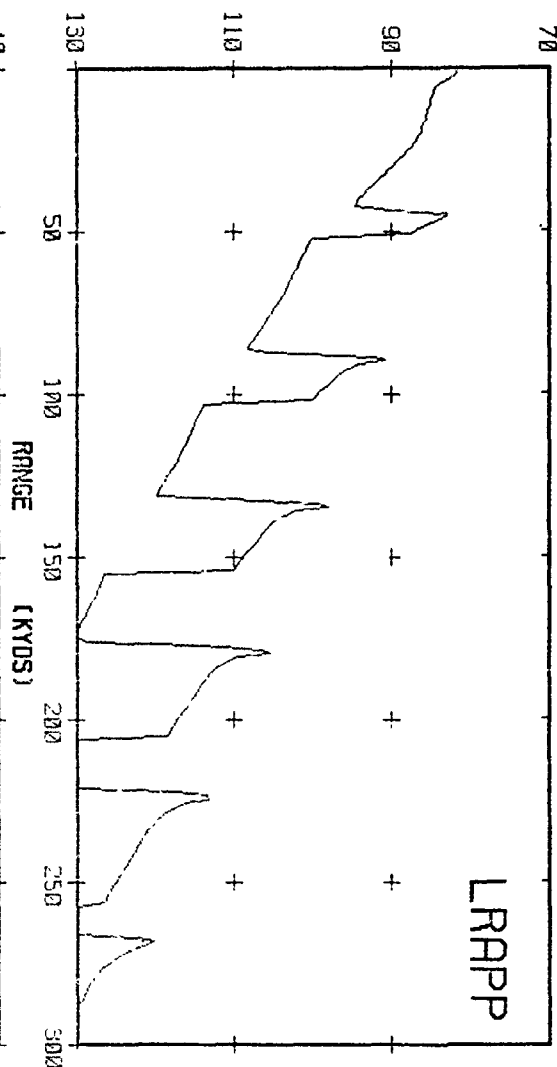


AREA 38 SUMMER

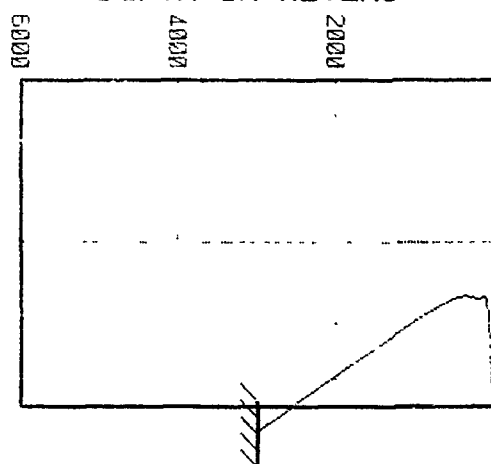
S 20 R 60 F 2000

1450 M/S 1500 1550

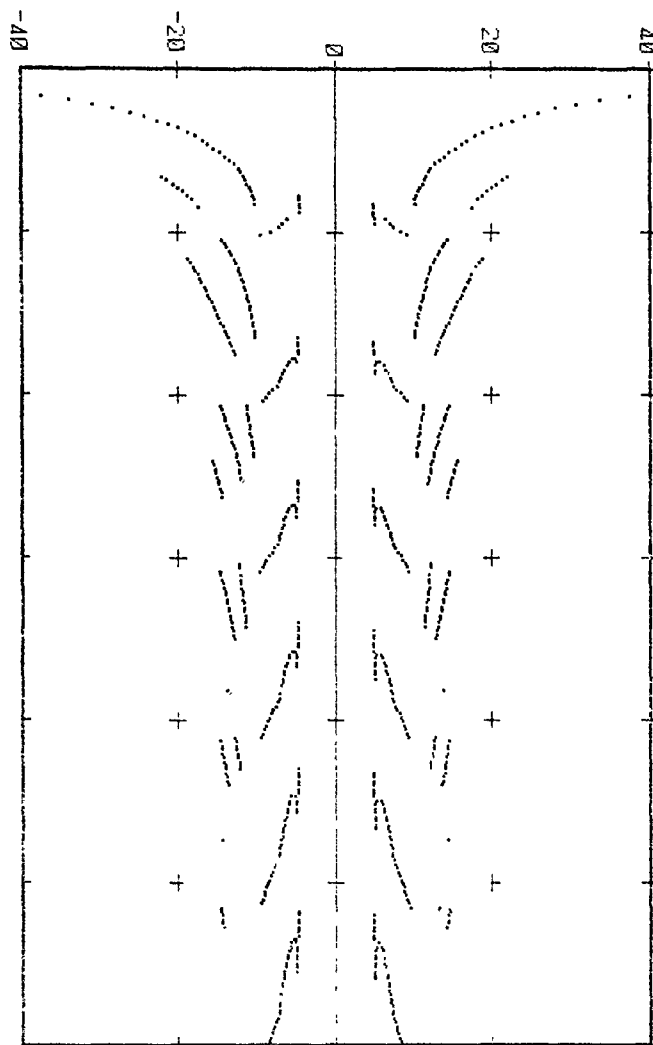
DB LOSS



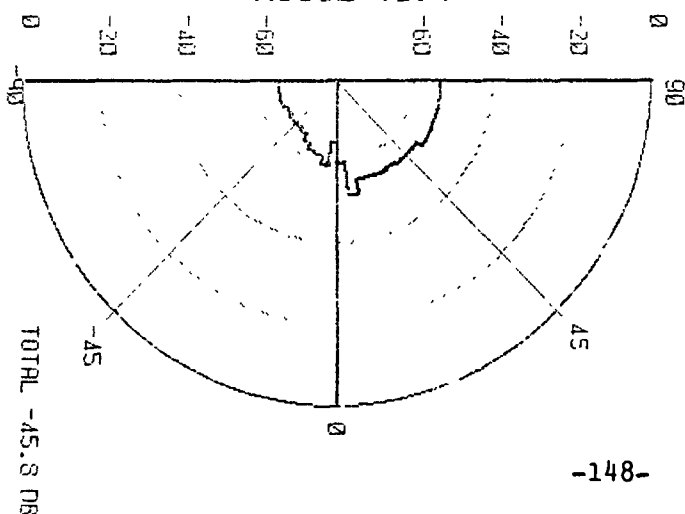
DEPTH IN METERS



ARRIVAL ANGLE



NOISE (DB)

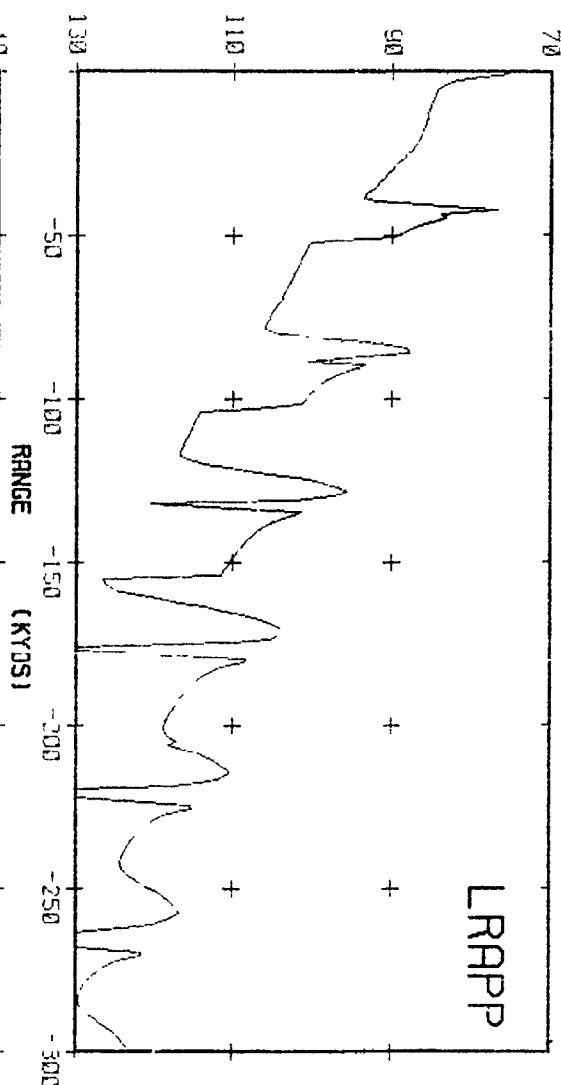


MSS AREA 38 SUMMER

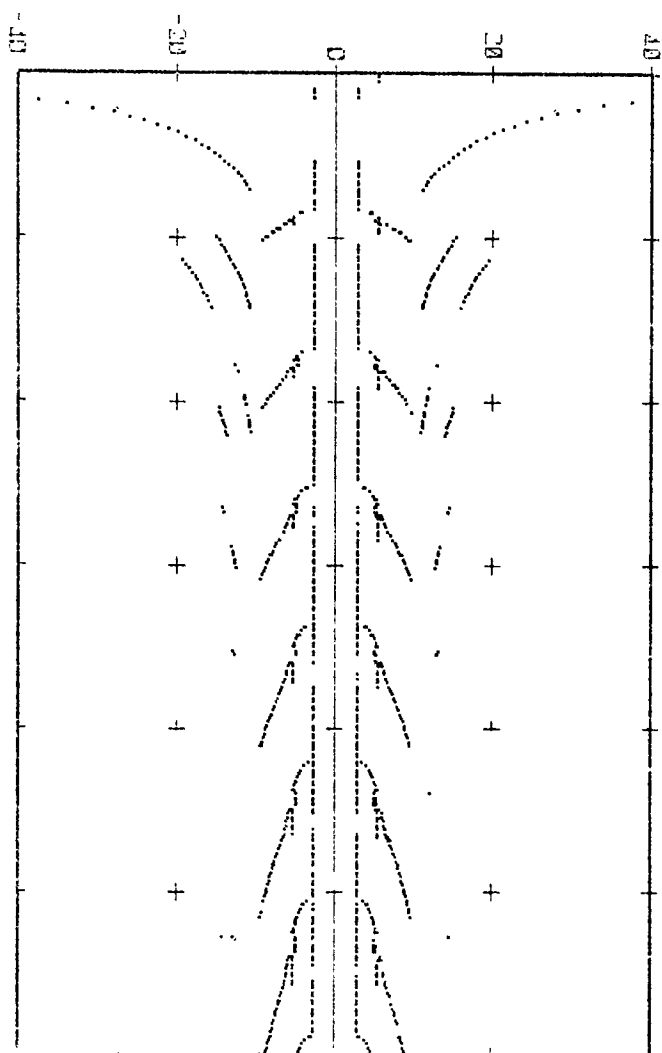
S 50 R 60 F 2000

LRAPP

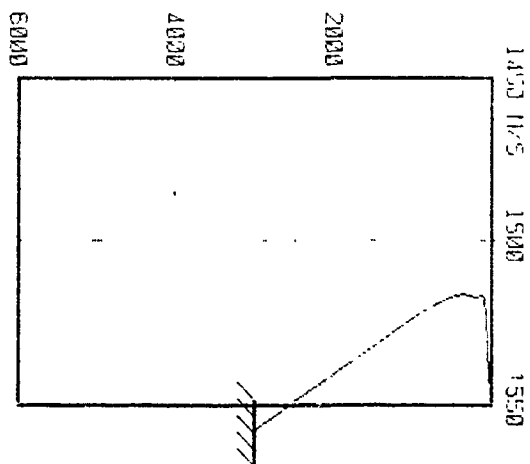
DB LOSS



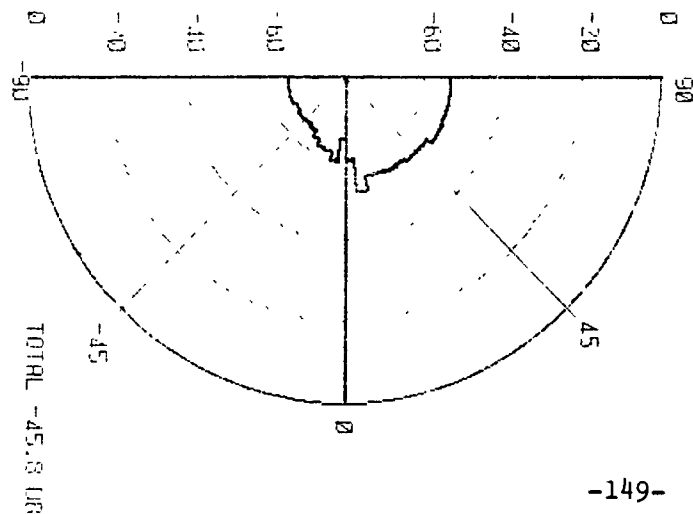
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

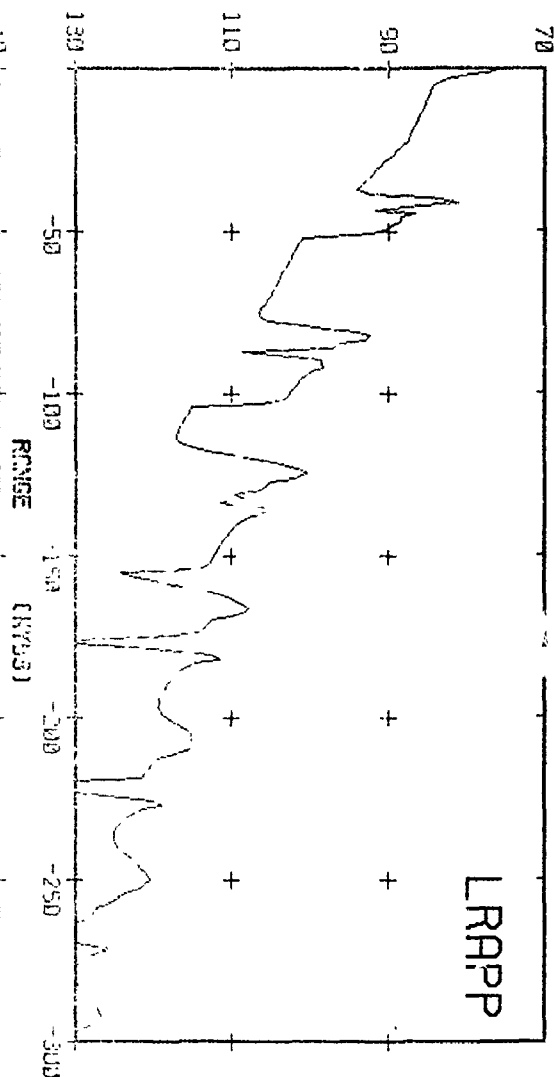


HSS AREA 38 SUMMER

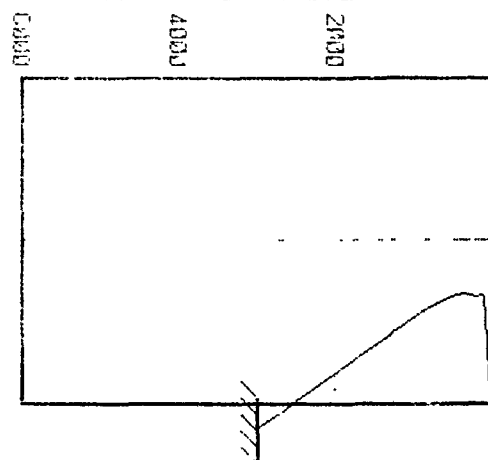
S 233 R 60 F 2650

1450 M/S 1500 1550

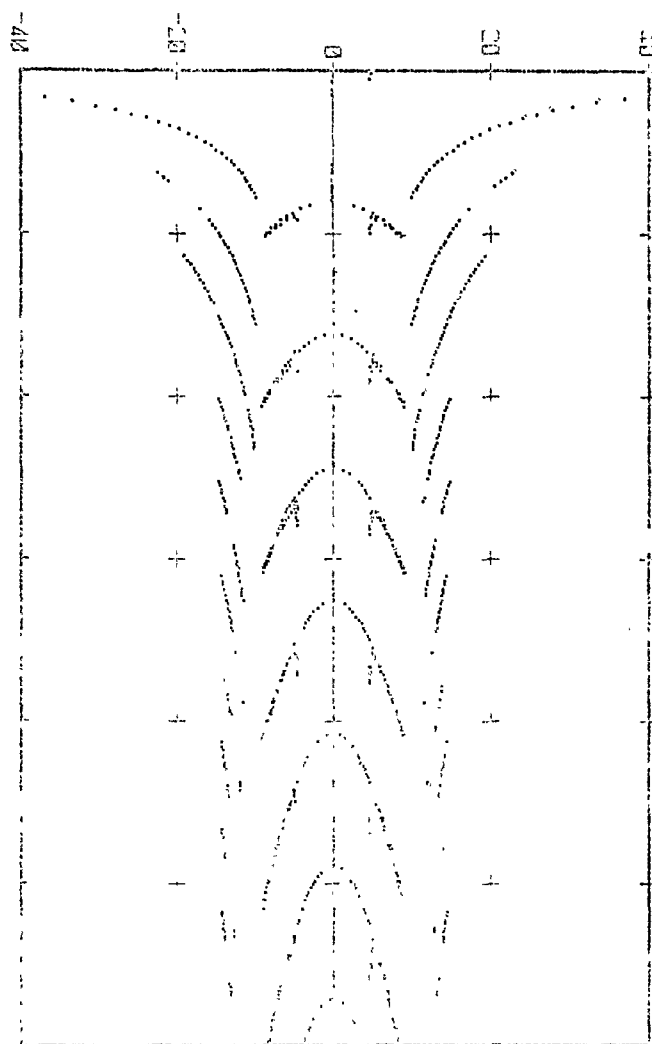
DB LOSS



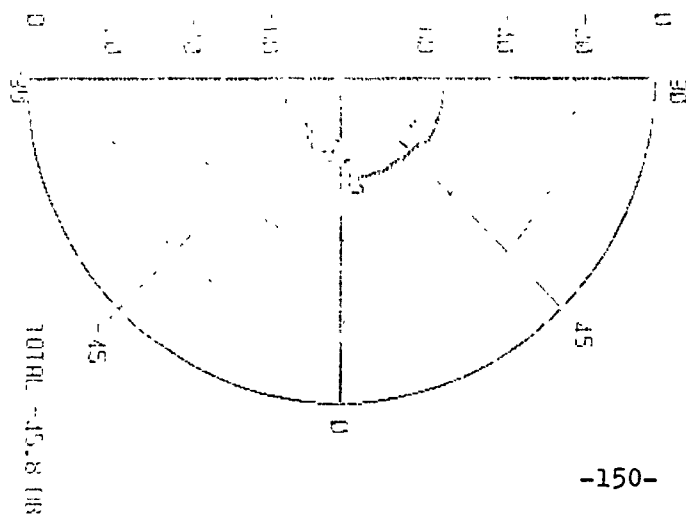
DEPTH IN METERS



ARRIVAL ANGLE



NOISE (DB)

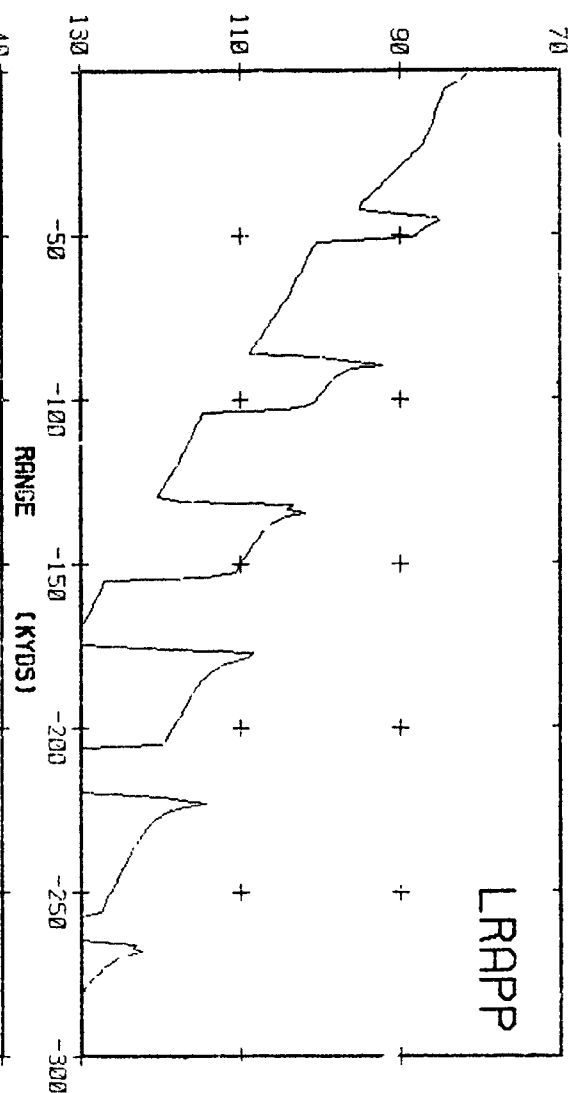


ALGER 303 SUMMER

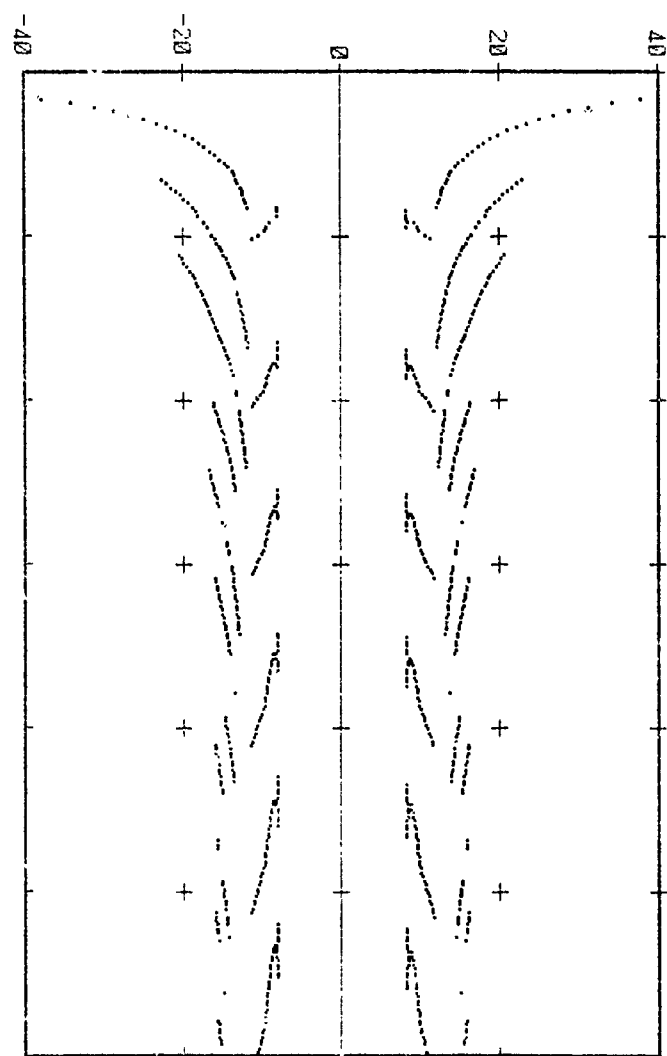
S 20 R 133 F 2000

LRAPP

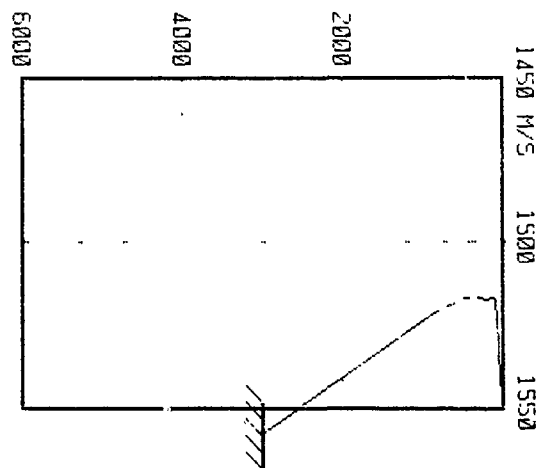
DB LOSS



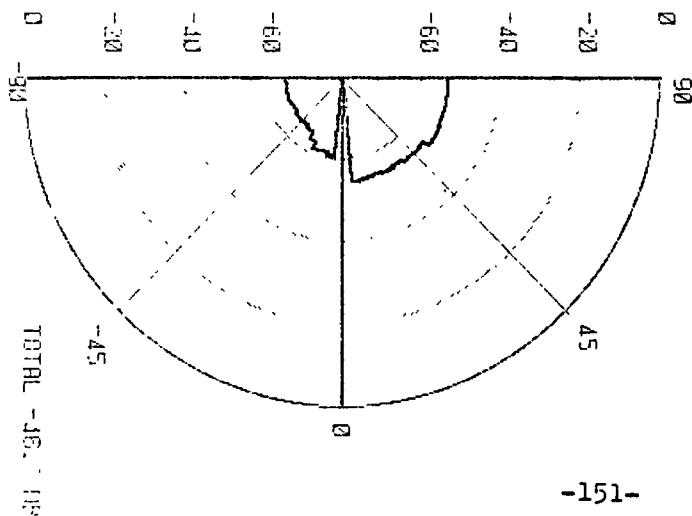
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



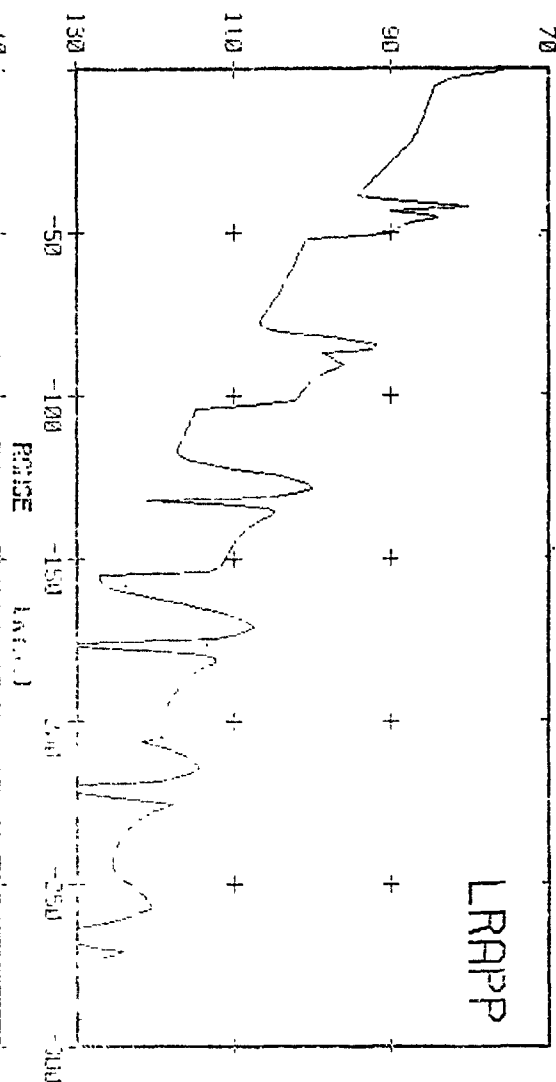
AREA 38 SUMMER

S 50 R 133 F 2000

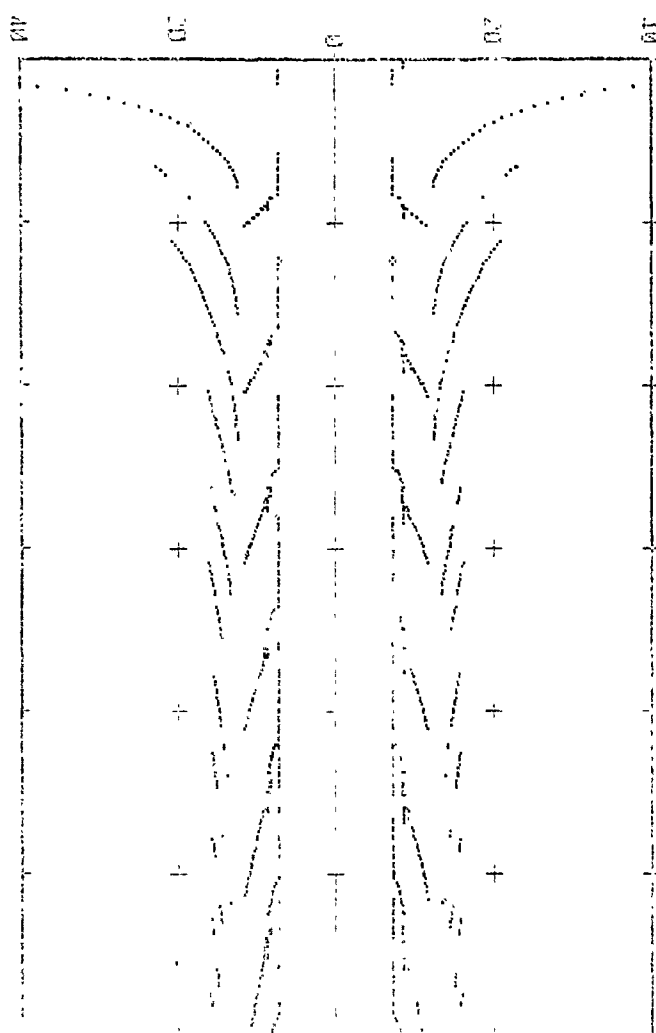
1450 M/S 1500

1550

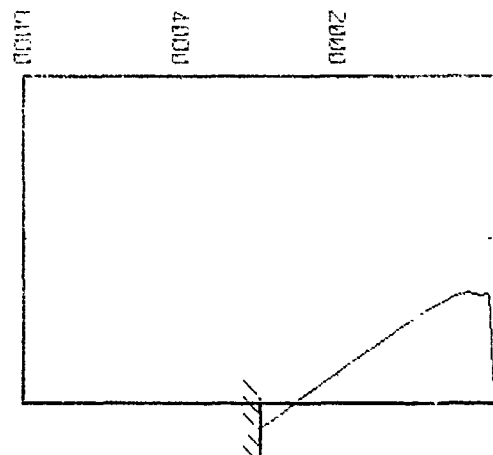
DB LOSS



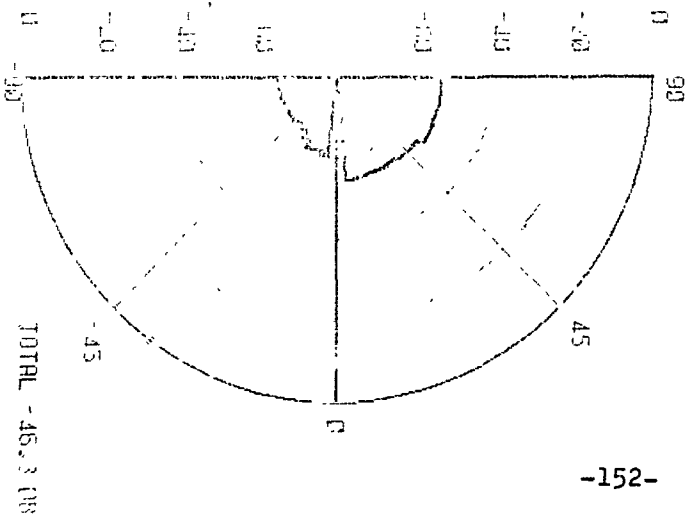
ARRIVAL ANGLE

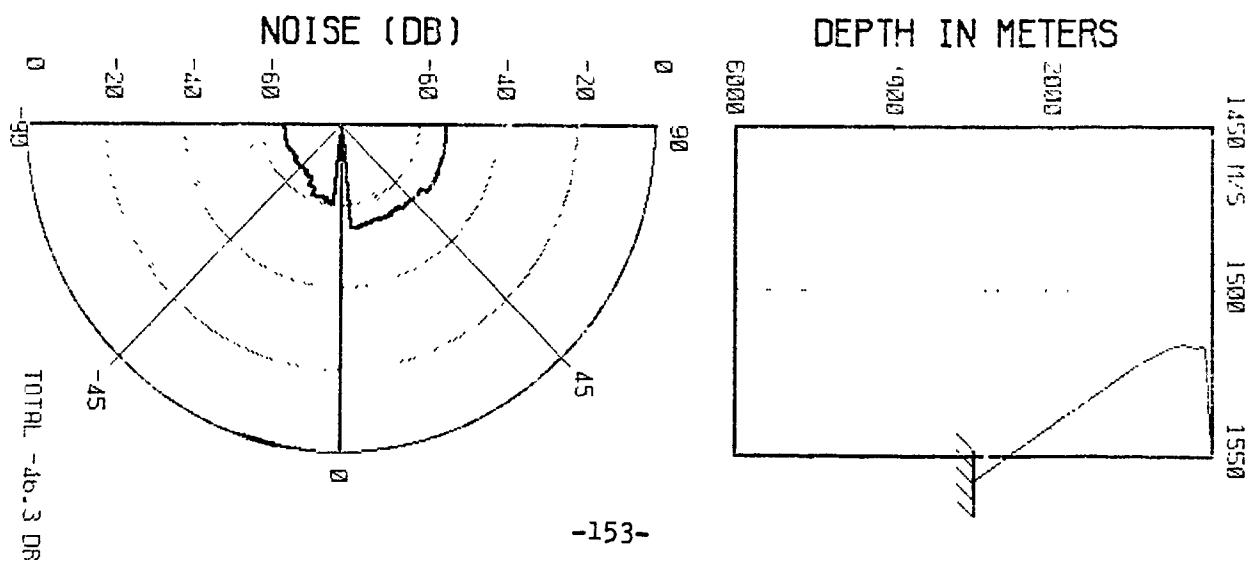
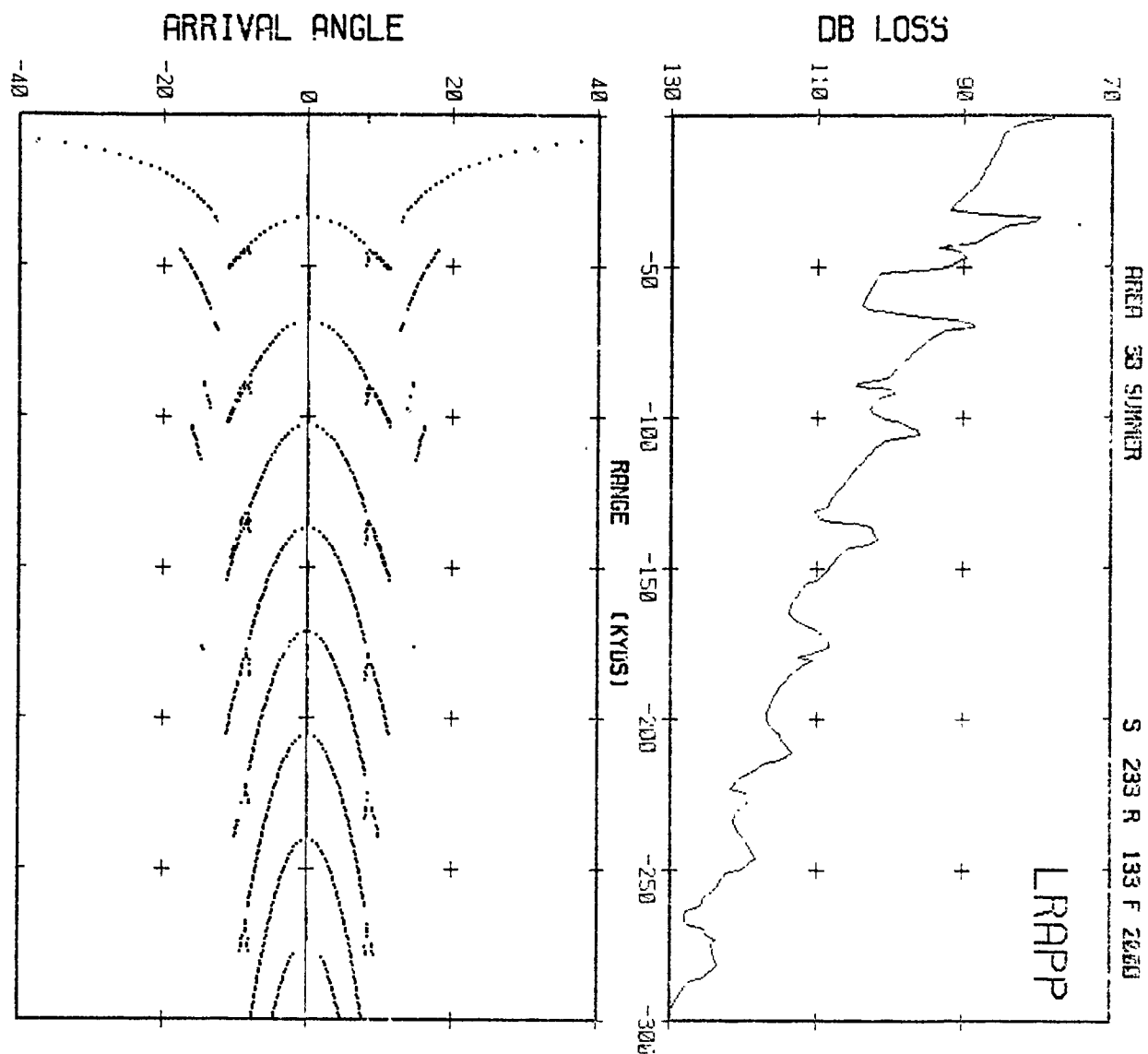


DEPTH IN METERS



NOISE (DB)





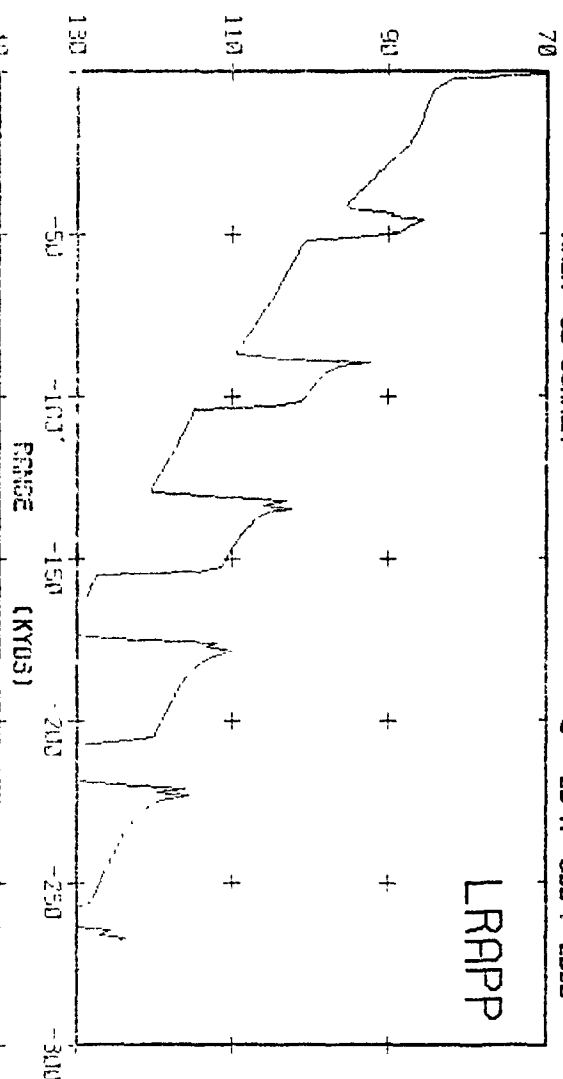
AREA 38 SUMMER

S 20 R 300 F 2020

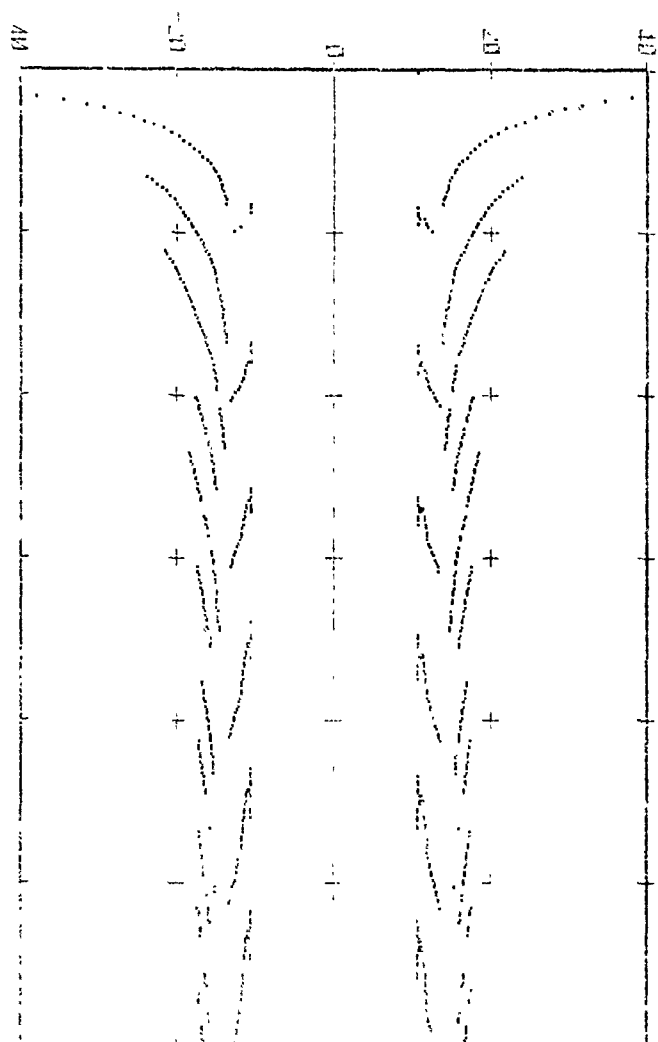
1450 M/S 1500

1550

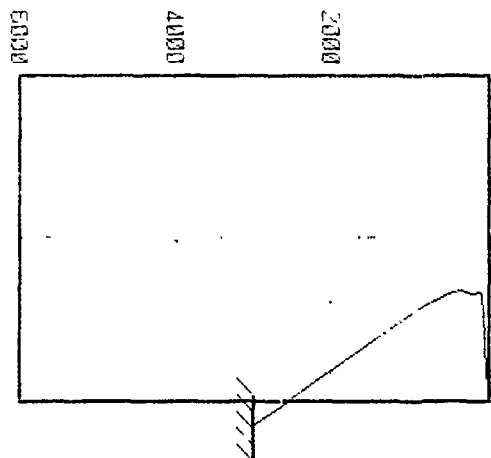
DB LOSS



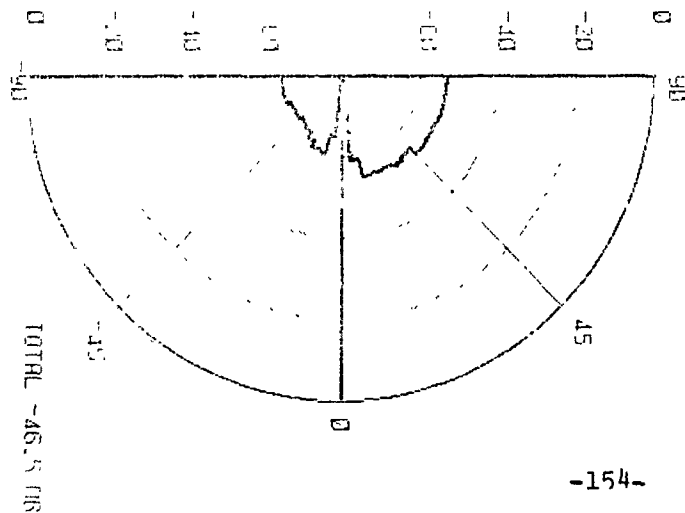
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



-154-

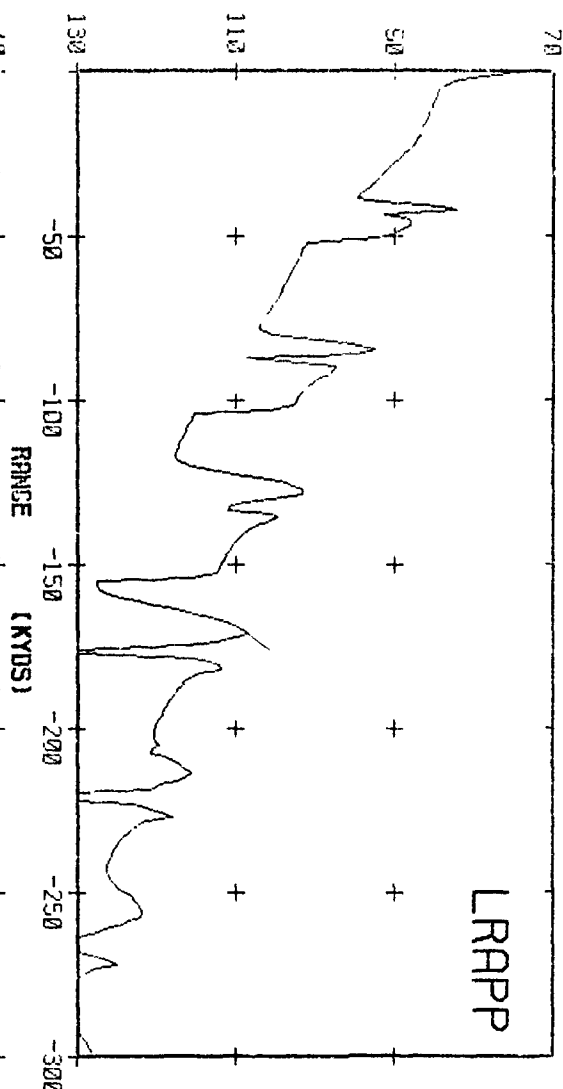


AREA 36 SUMMER

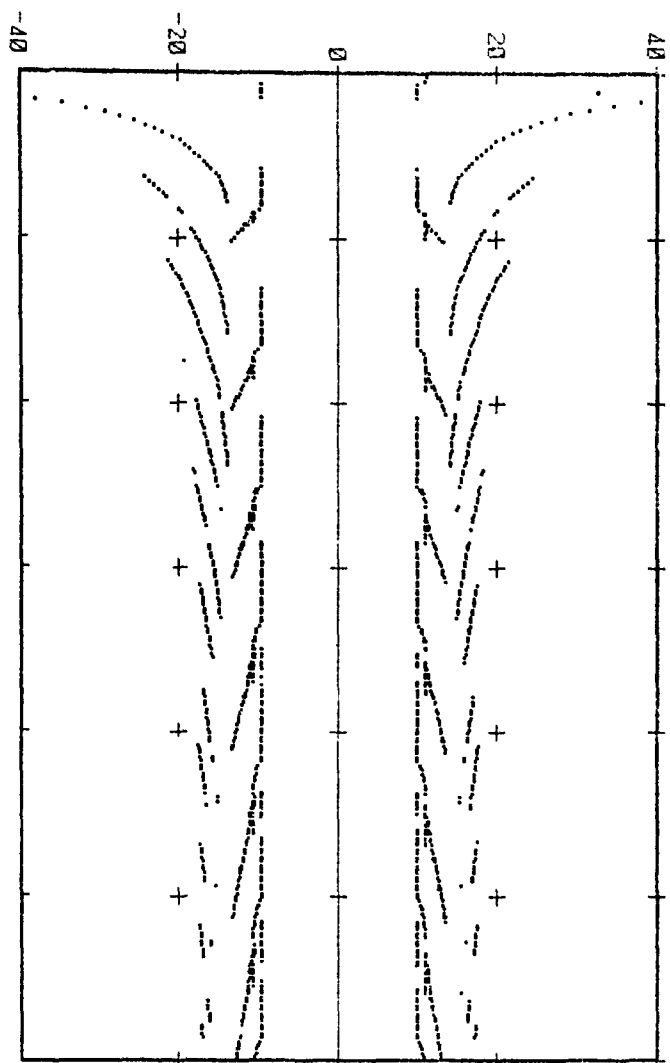
S 50 R 300 F 2000

LRAPP

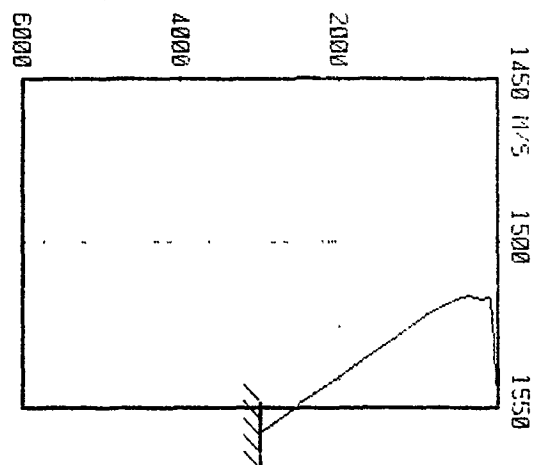
DB LOSS



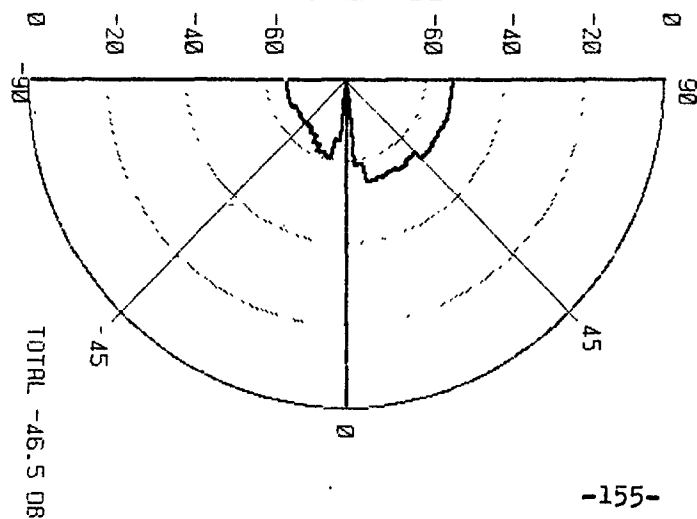
ARRIVAL ANGLE

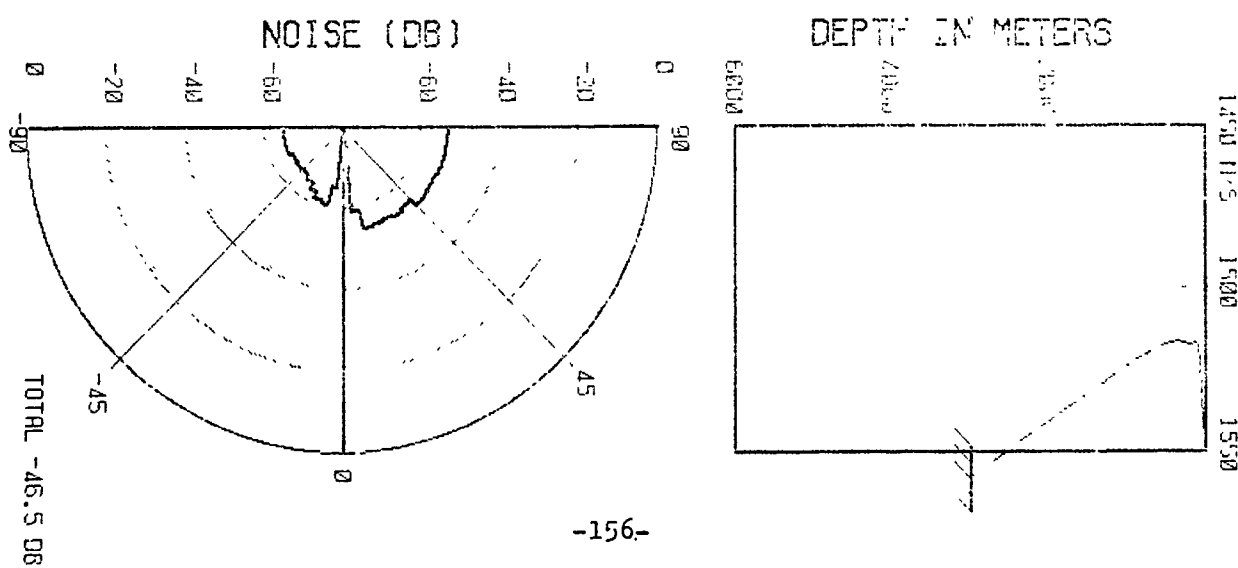
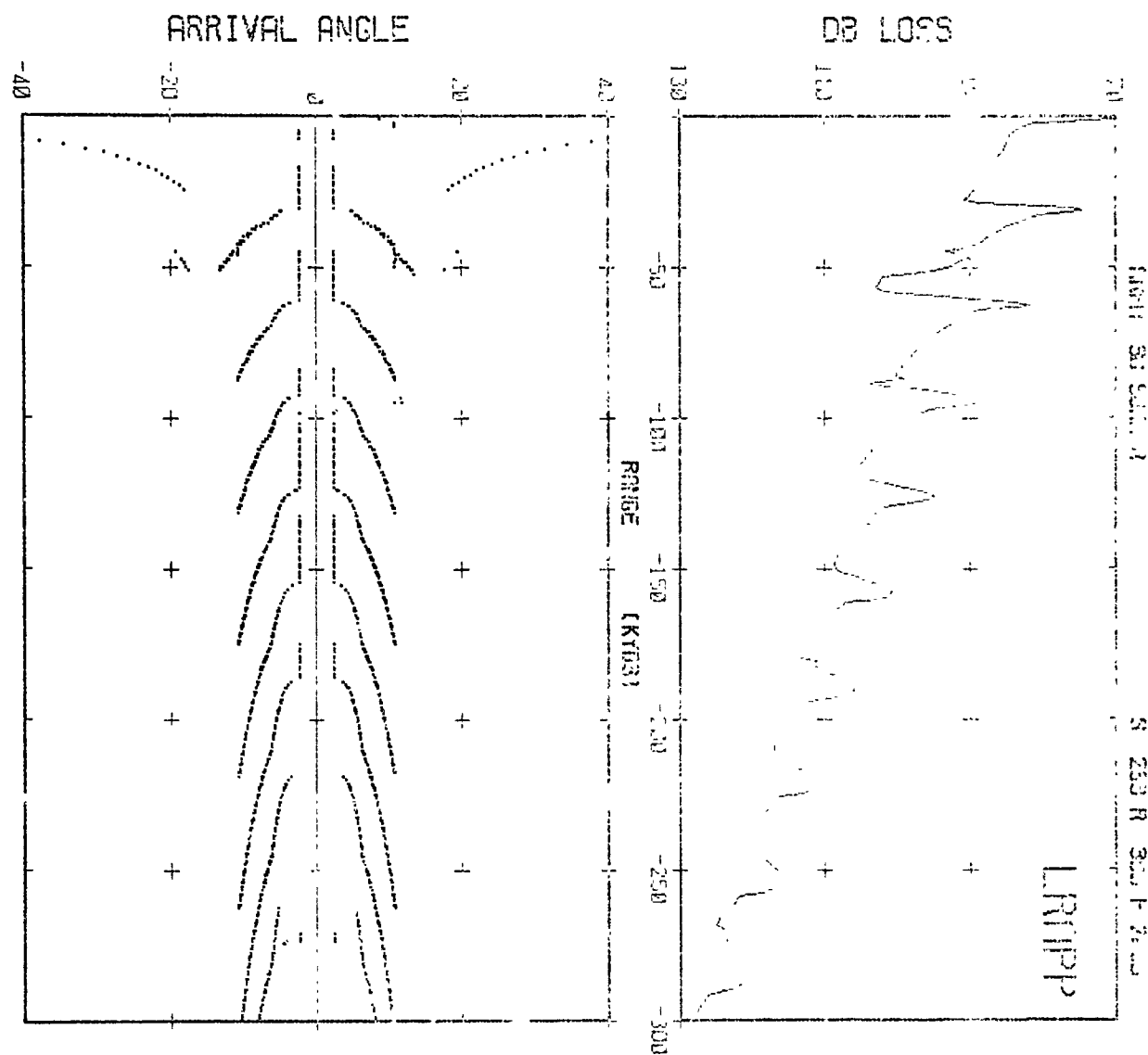


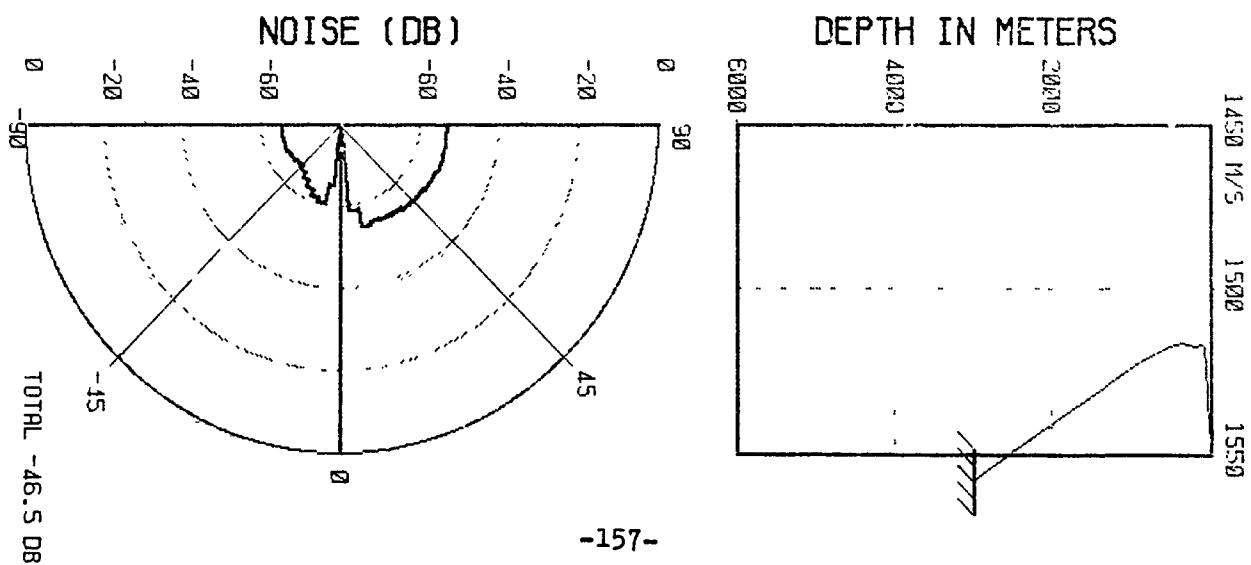
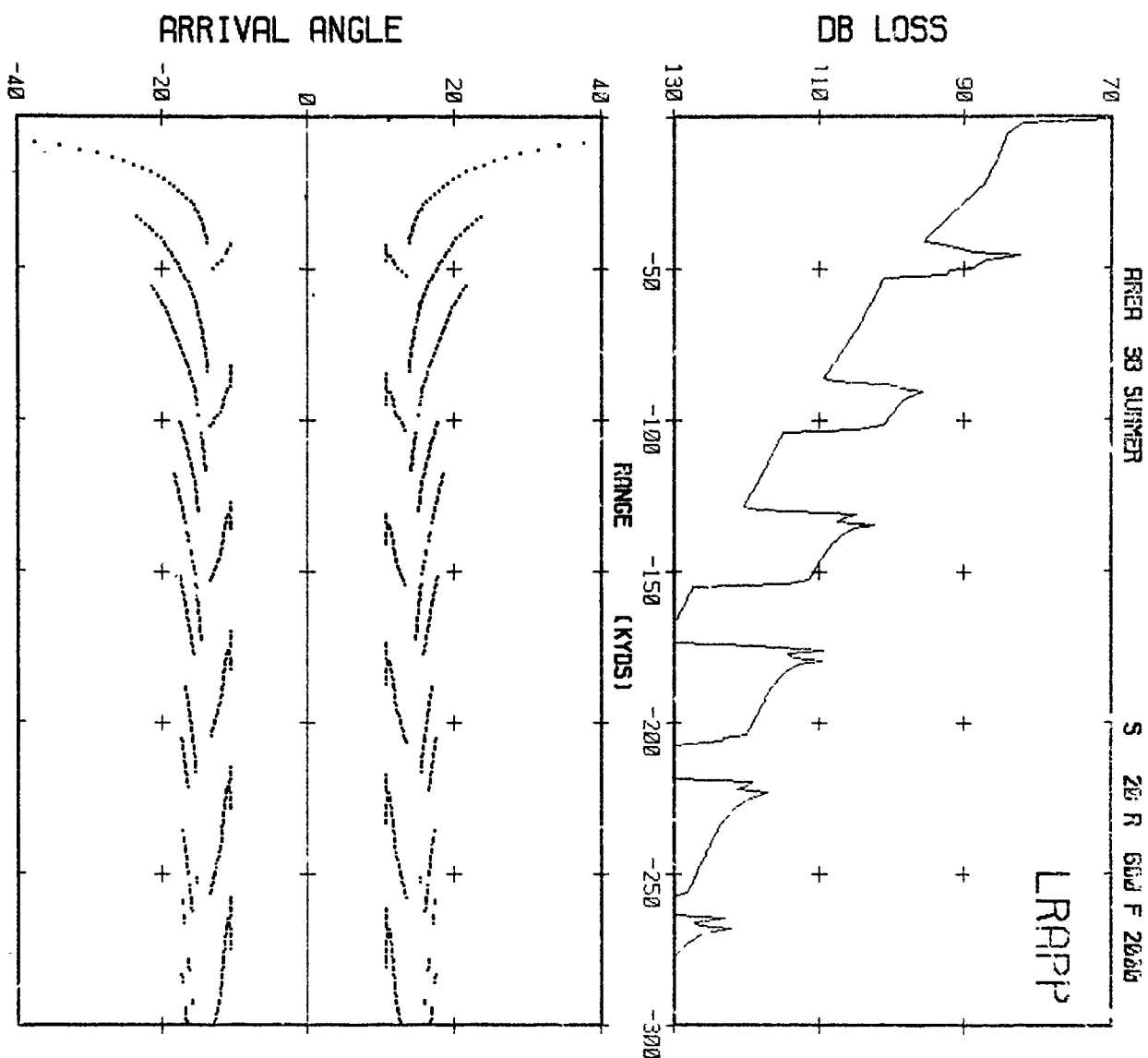
DEPTH IN METERS



NOISE (DB)







ARRER 38 SUMMER

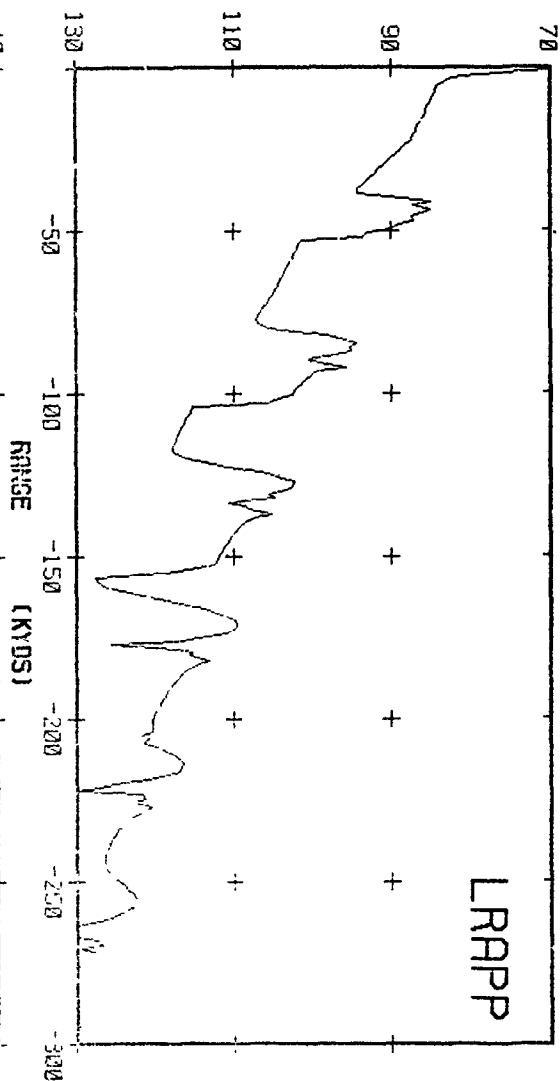
S 50 R 600 F 2000

1450 M/S

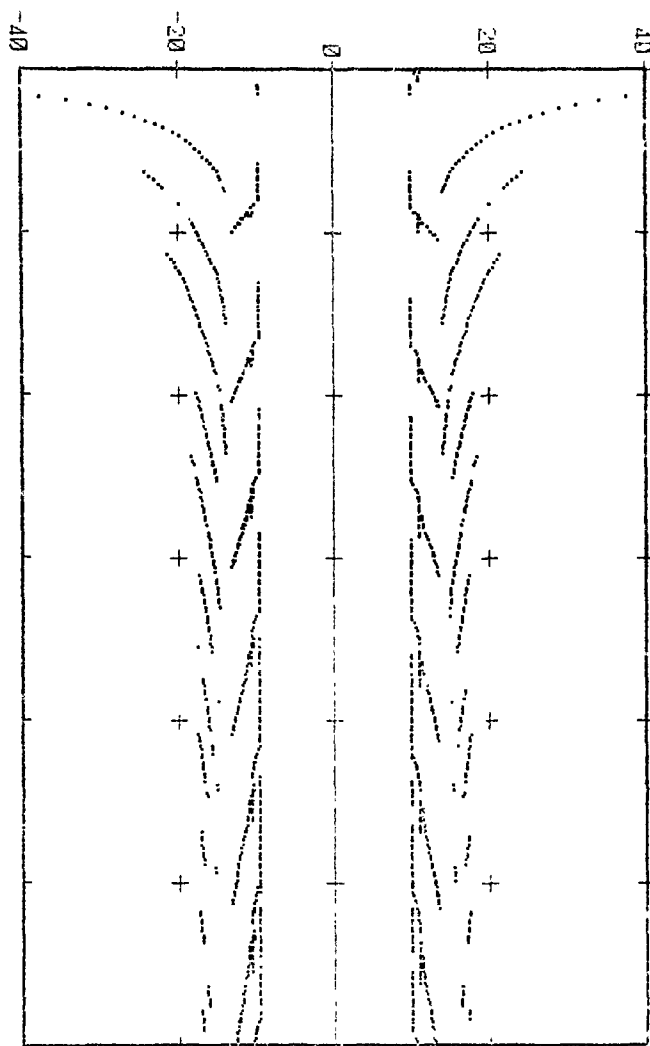
1500

1550

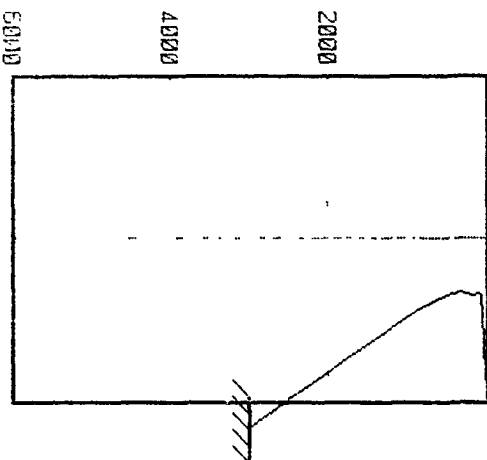
DB LOSS



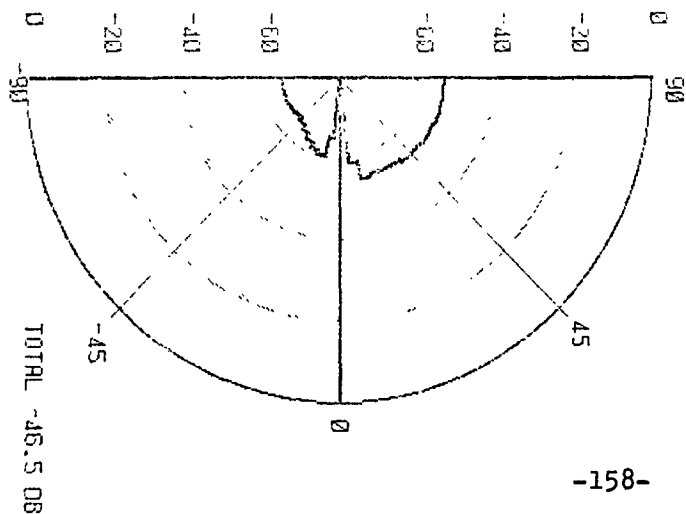
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

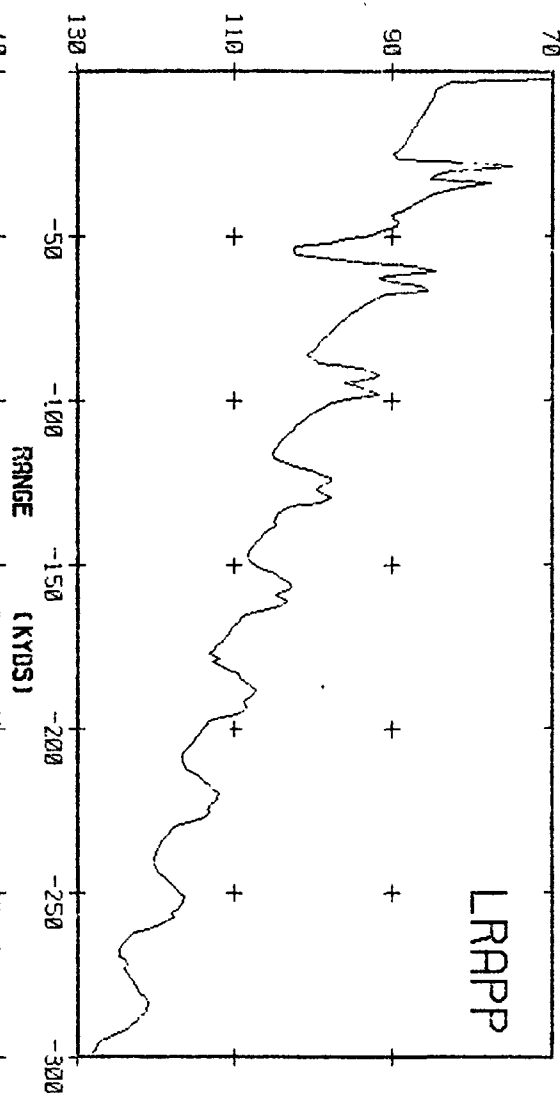


AIRER 36 SUMMER

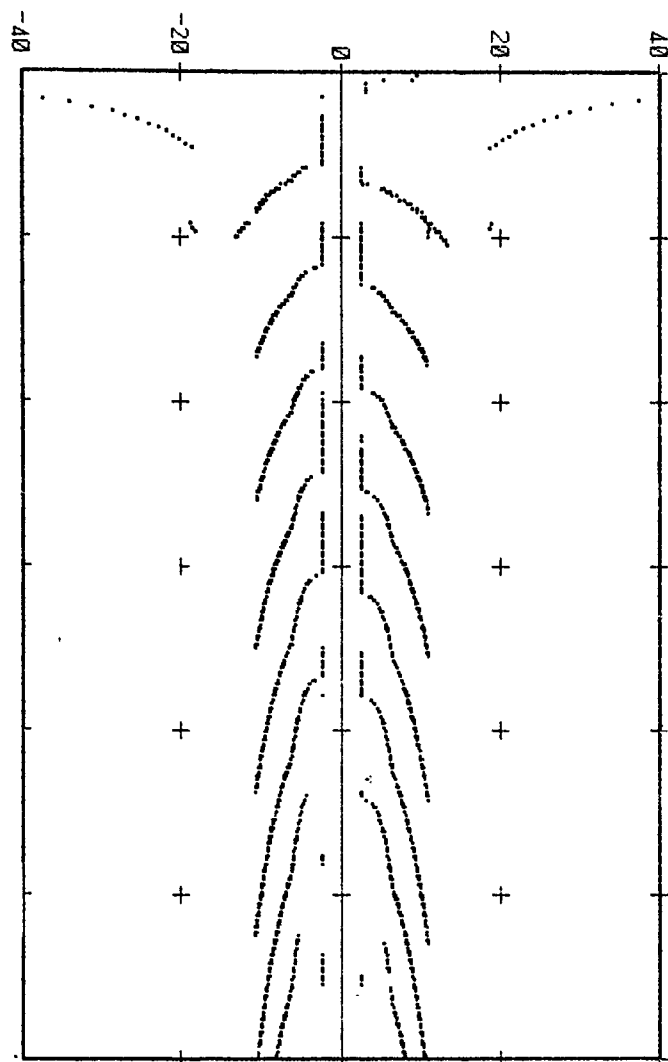
S 233 R 680 F 2000

1450 M/S 1500 1550

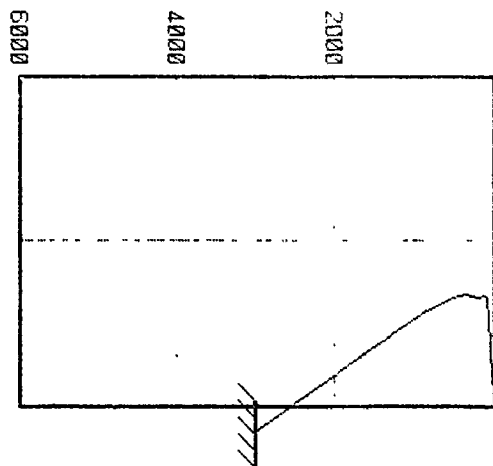
DB LOSS



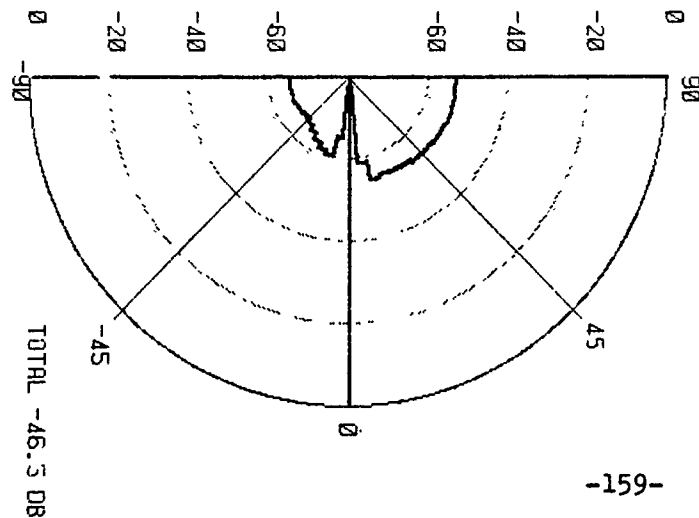
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



FOR SS SUMMER

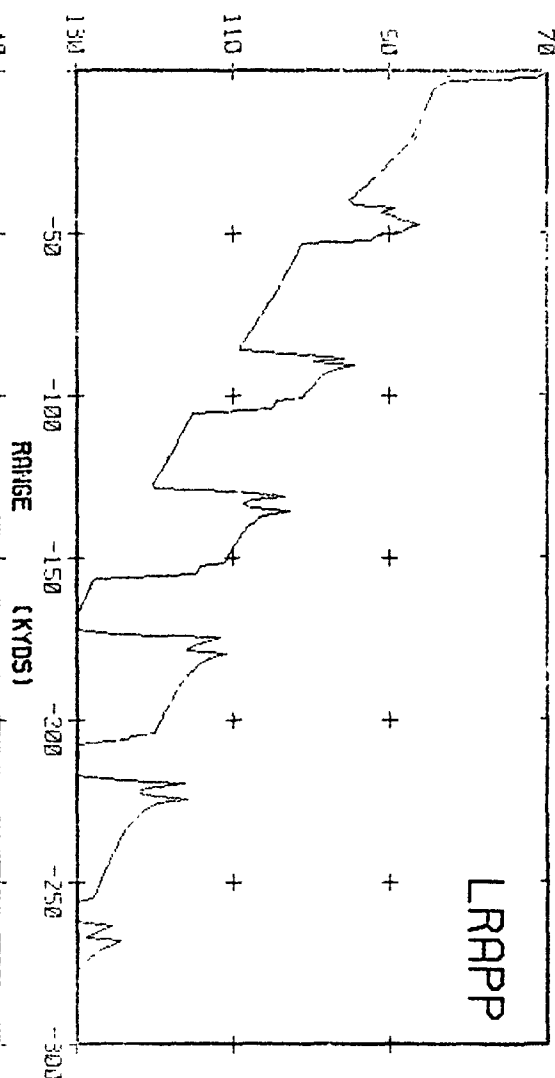
S 20 R 1000 F 2000

1450 M/S

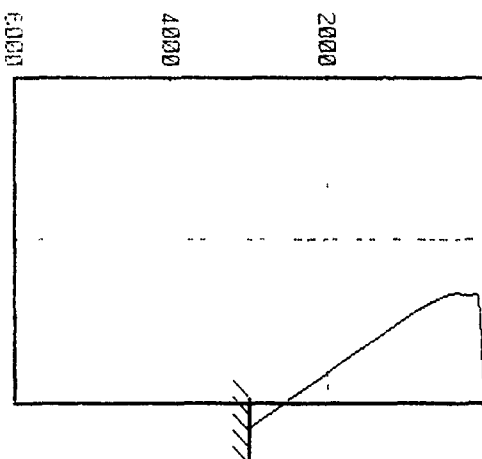
1500

1550

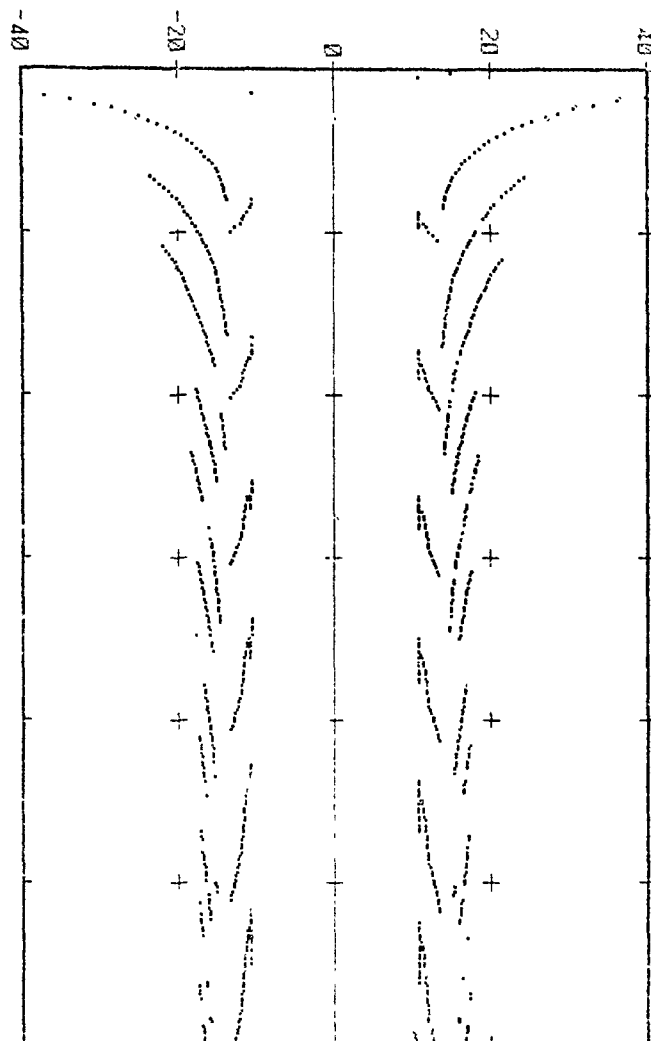
DB LOSS



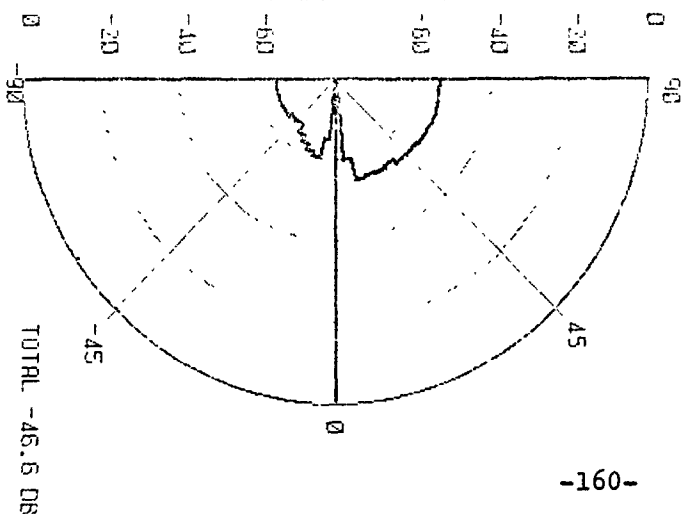
DEPTH IN METERS



ARRIVAL ANGLE



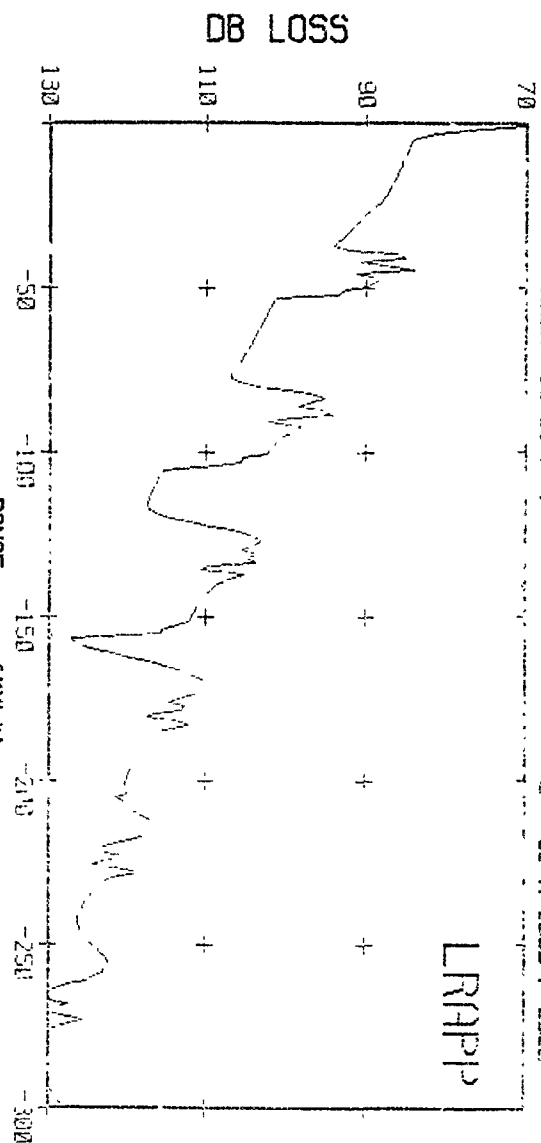
NOISE (DB)



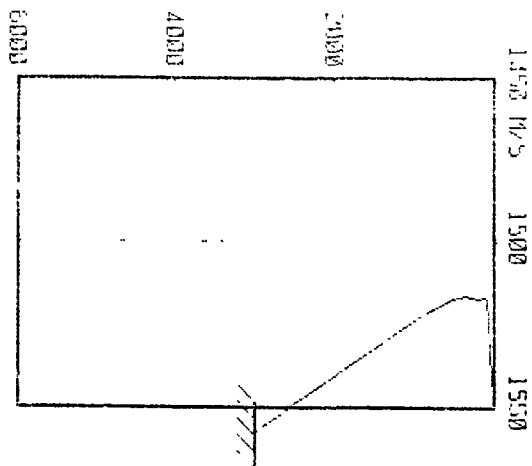
LINE 33 SPECTR

3 50 R 1000 F 20.0

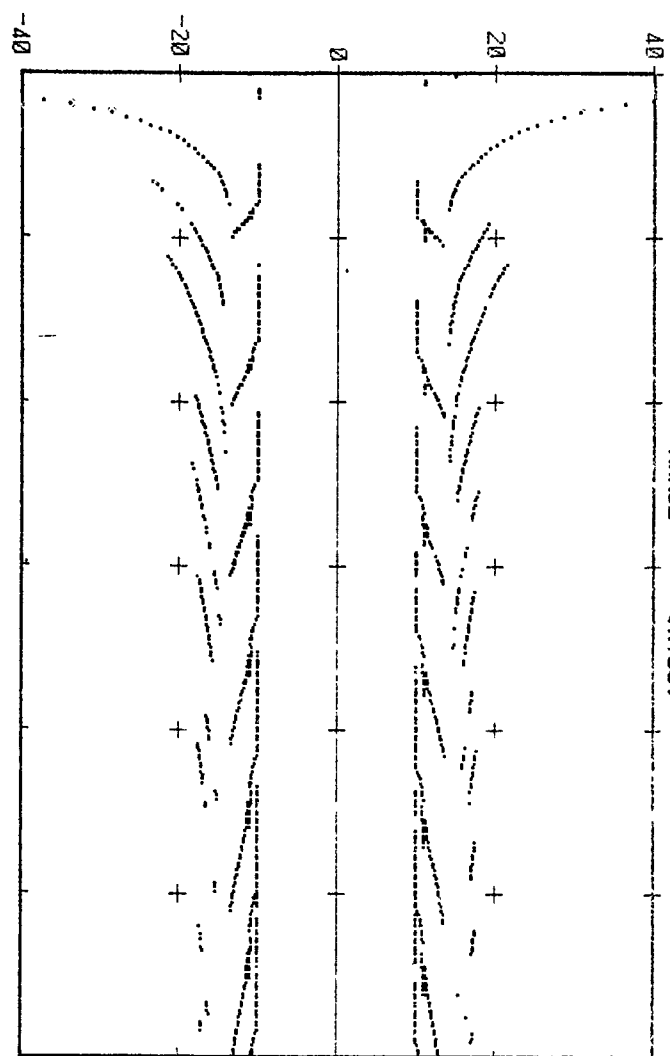
LRAPP



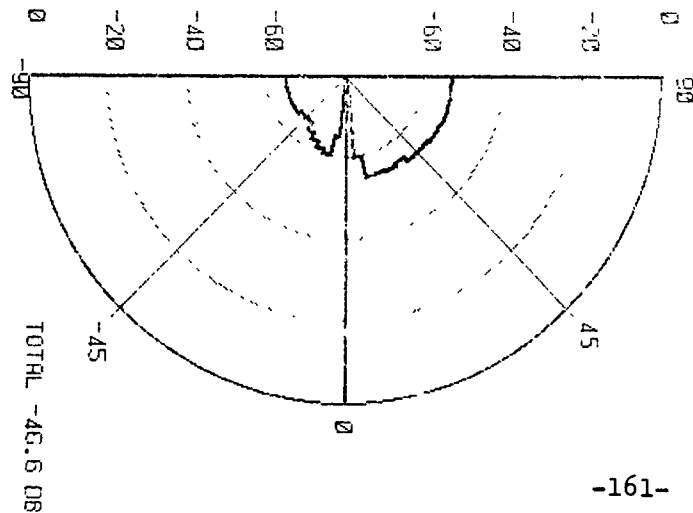
DEPTH IN METERS

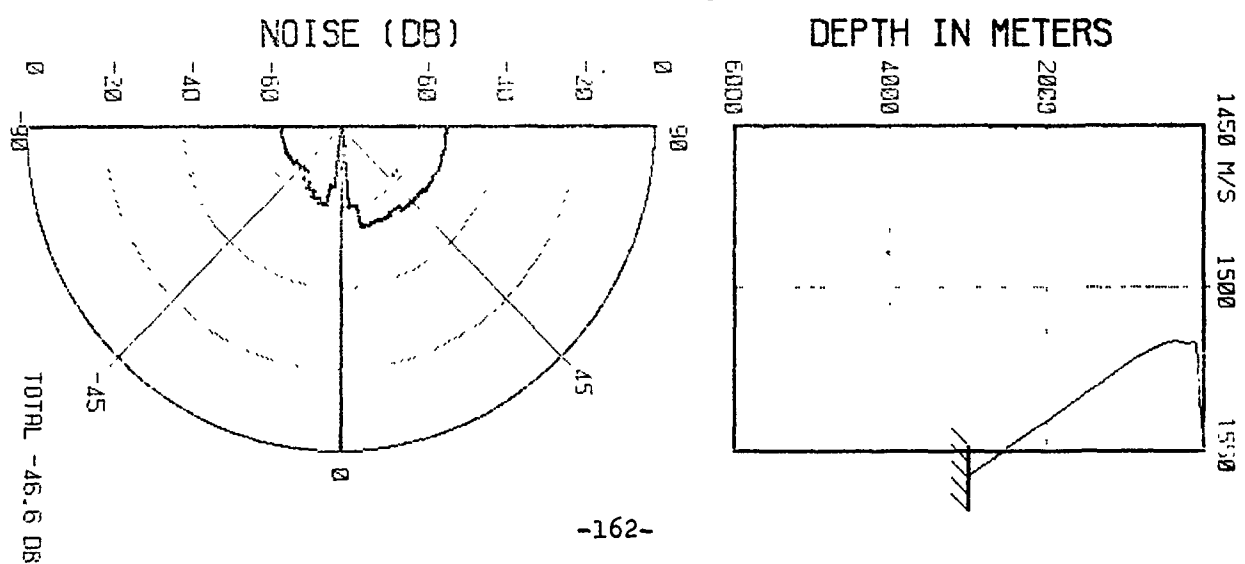
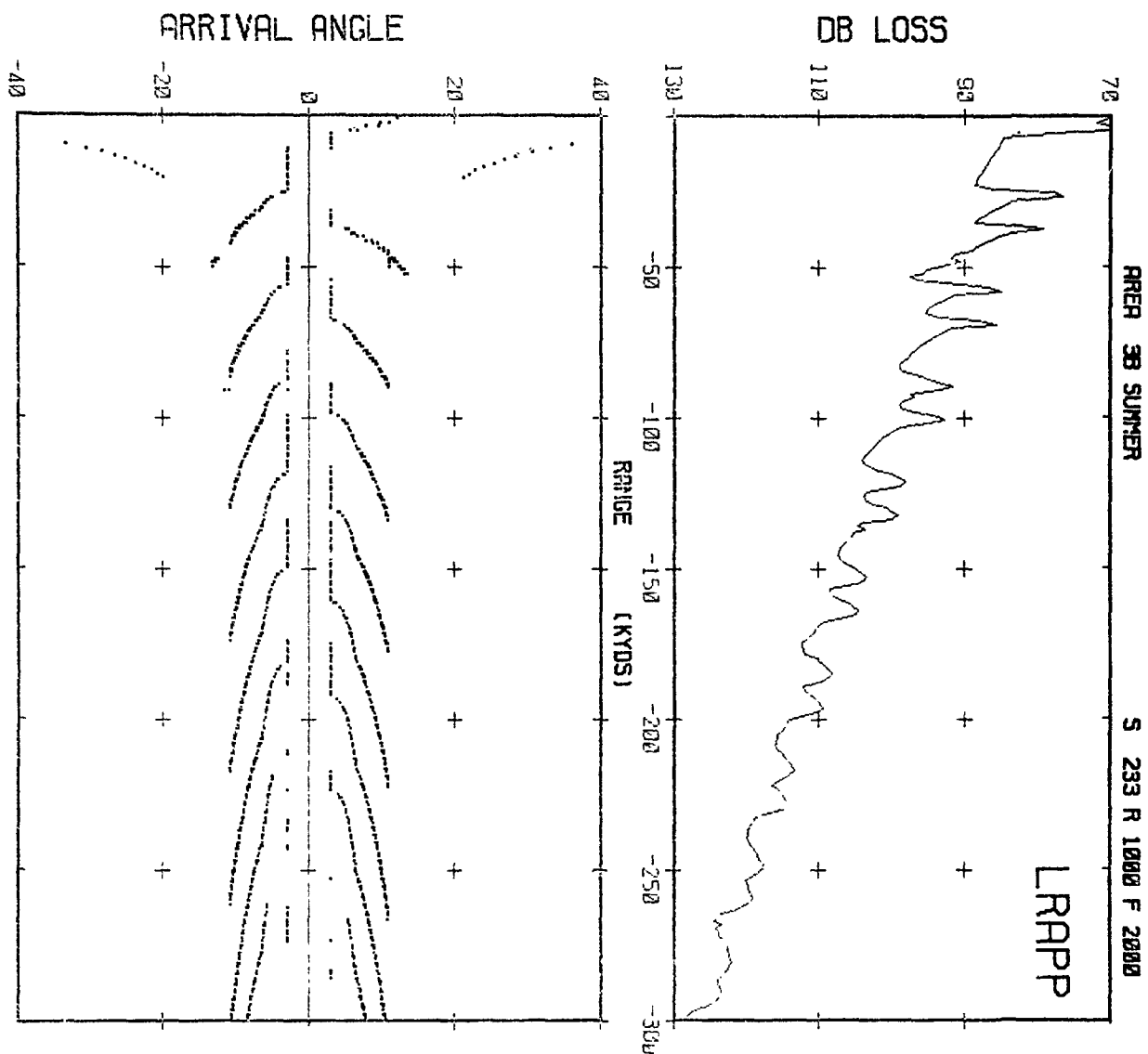


ARRIVAL ANGLE



NOISE (DB)



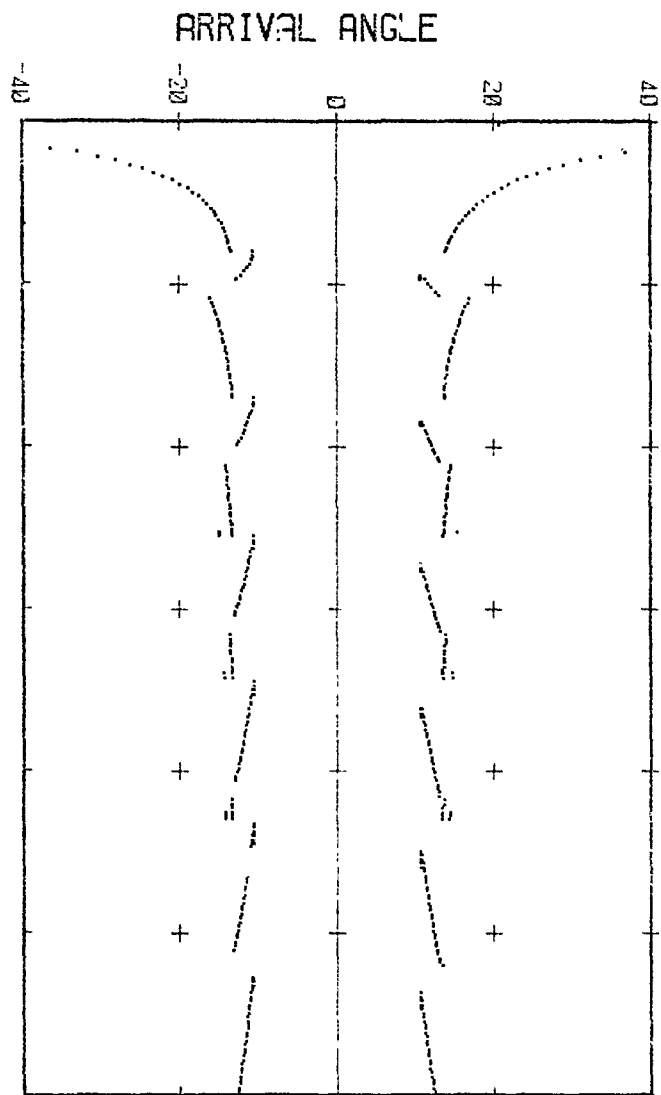
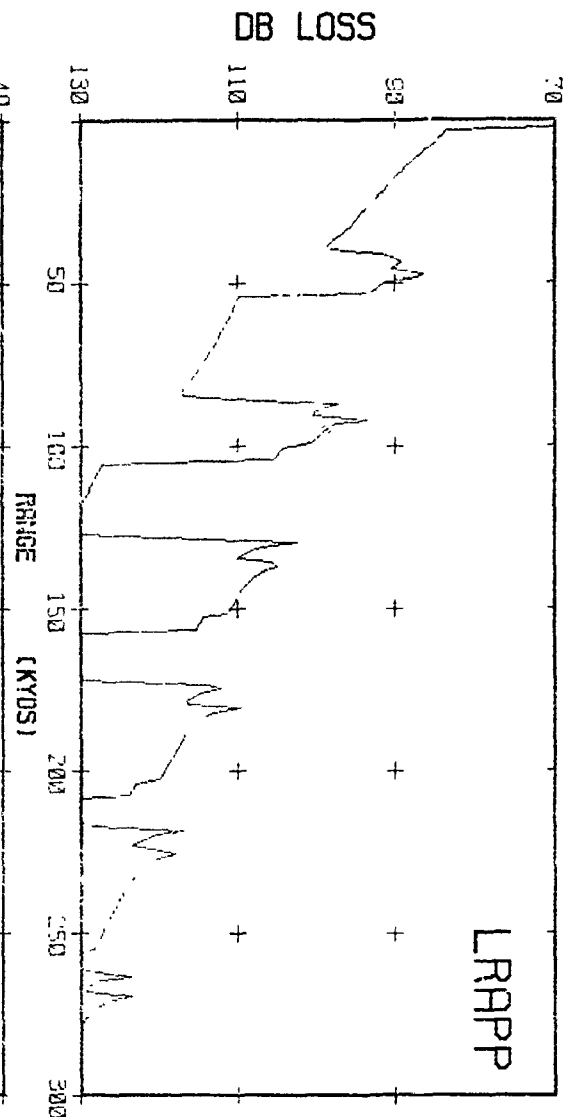




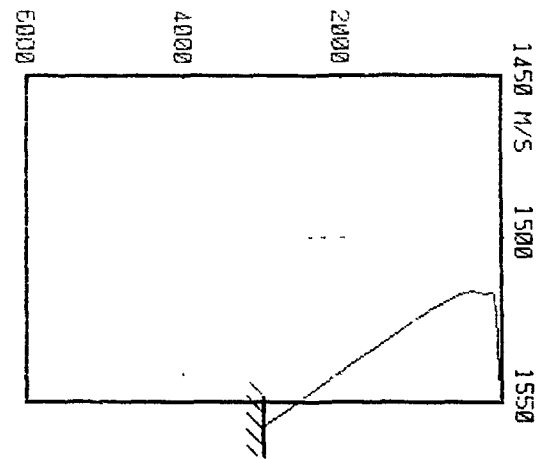
RRR 30 SUMMER

S 20 R 1500 F 2000

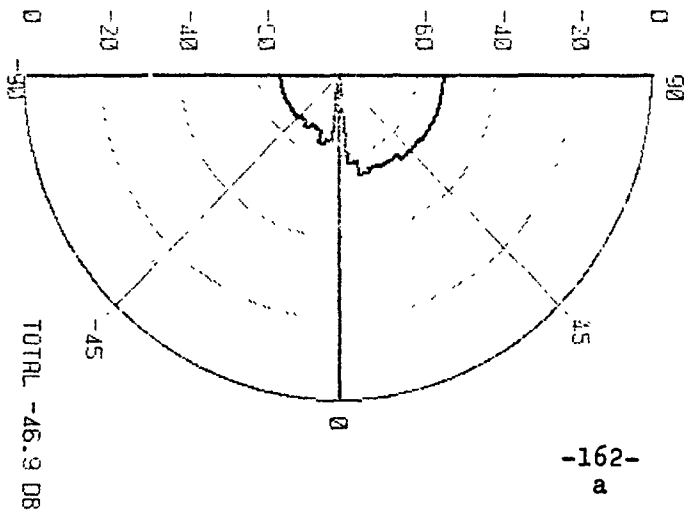
LRAPP



DEPTH IN METERS



NOISE (DB)

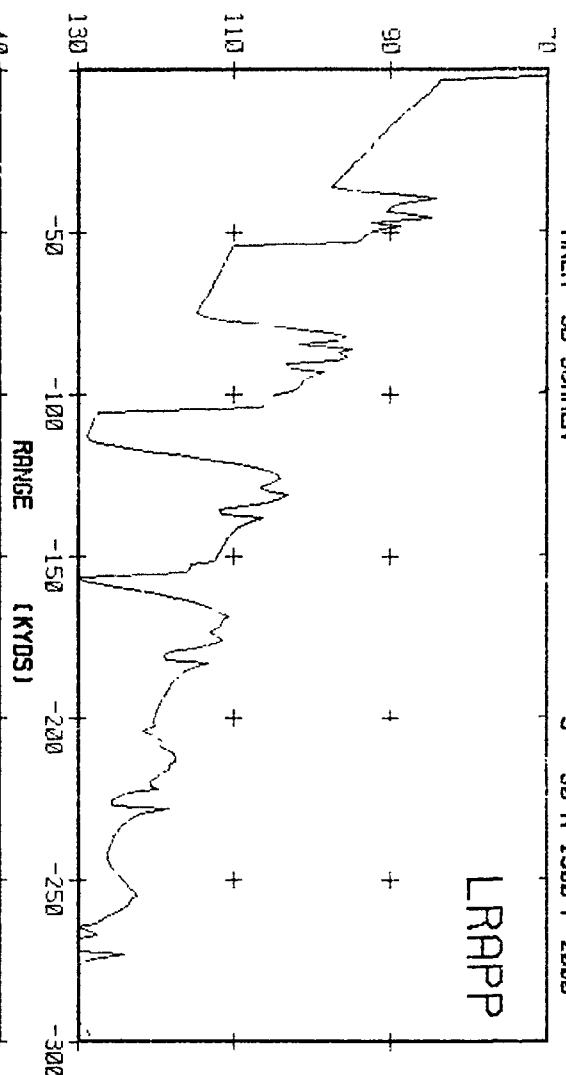


PIKE 38 SUMMER

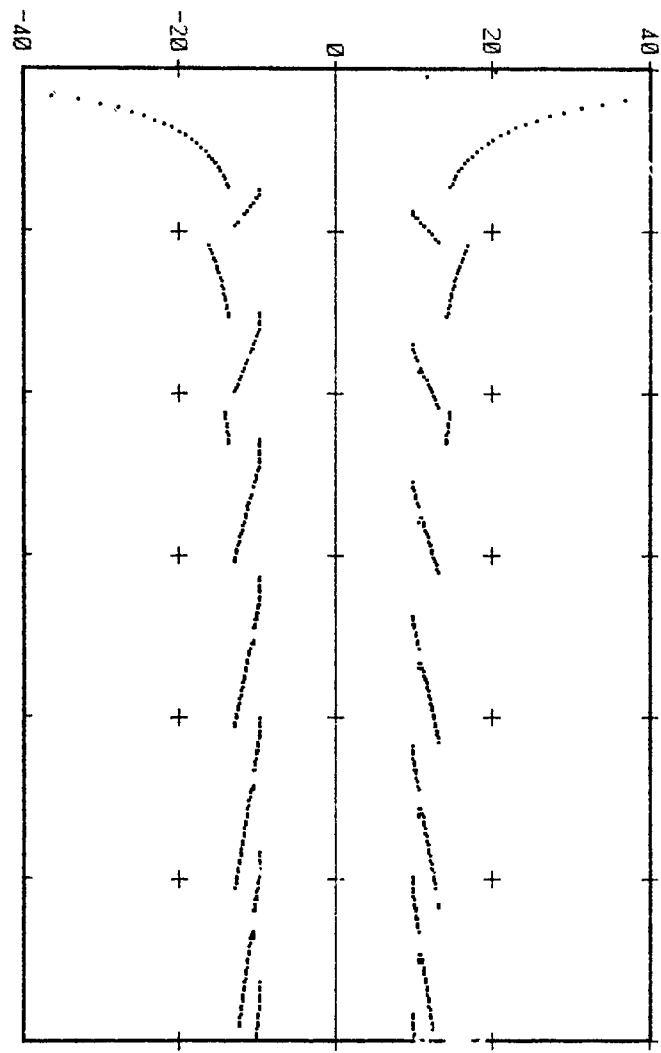
S 50 R 1500 F 2000

1450 14/5 1500 1550

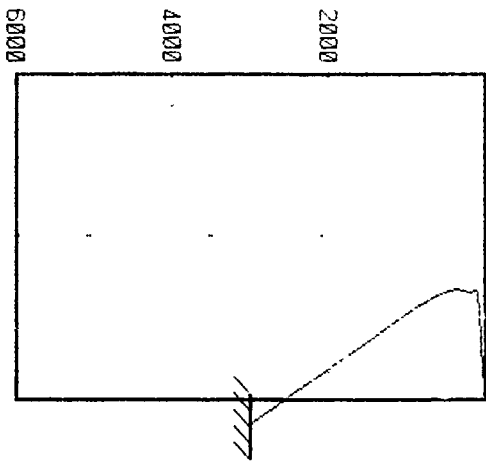
DB LOSS



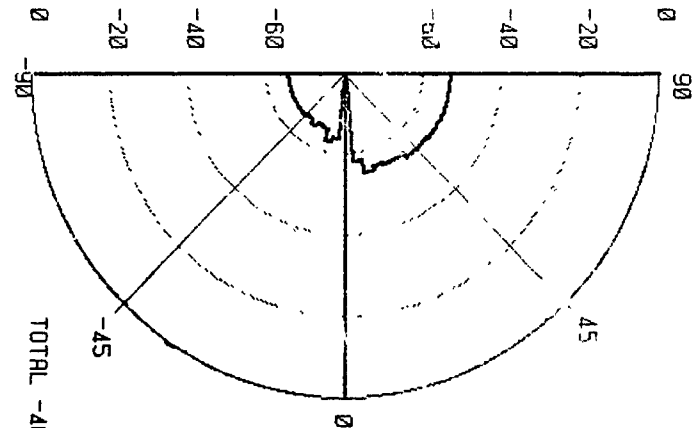
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DE)

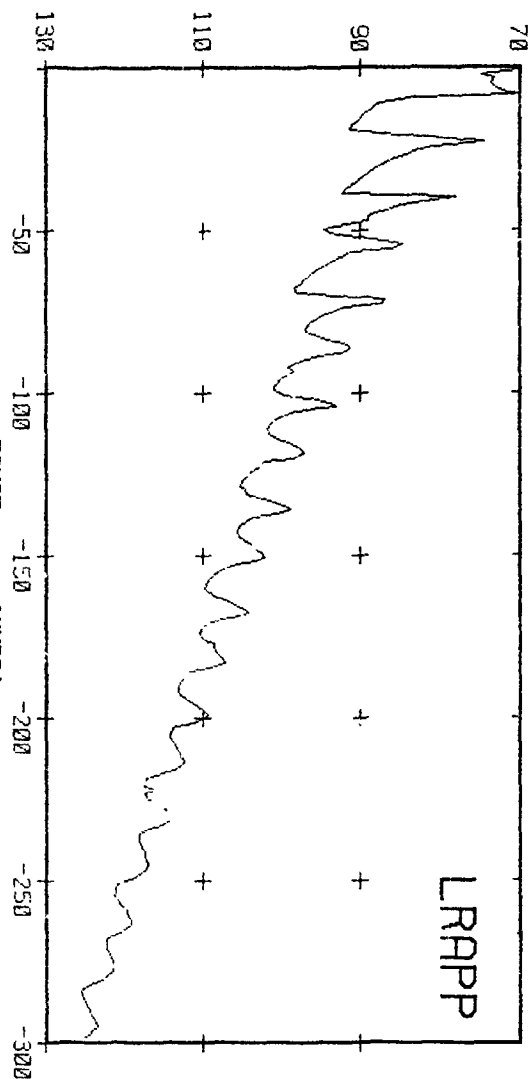


AREA 38 SUMMER

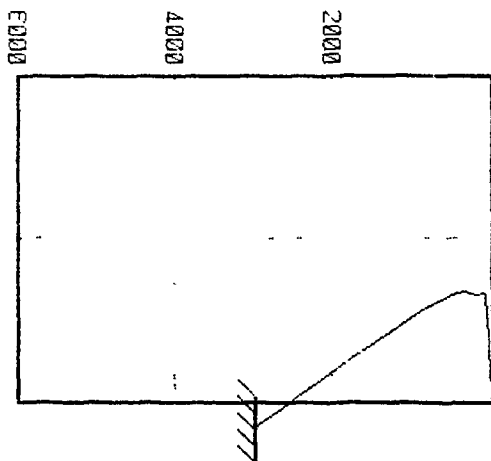
S 233 R 1500 F 2000

1450 M/S 1500 1550

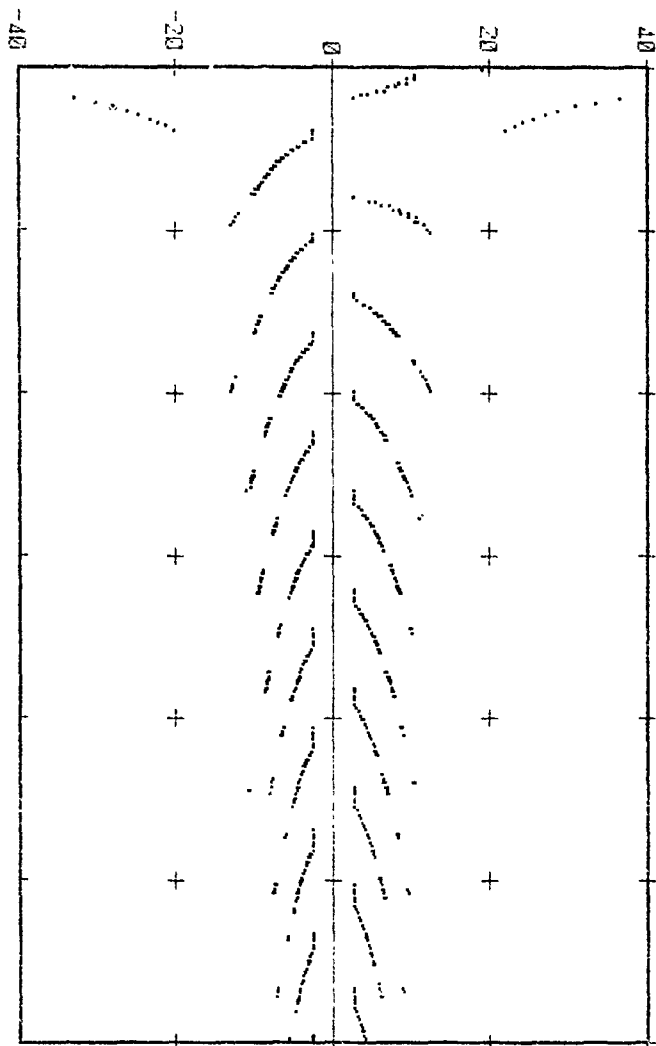
DB LOSS



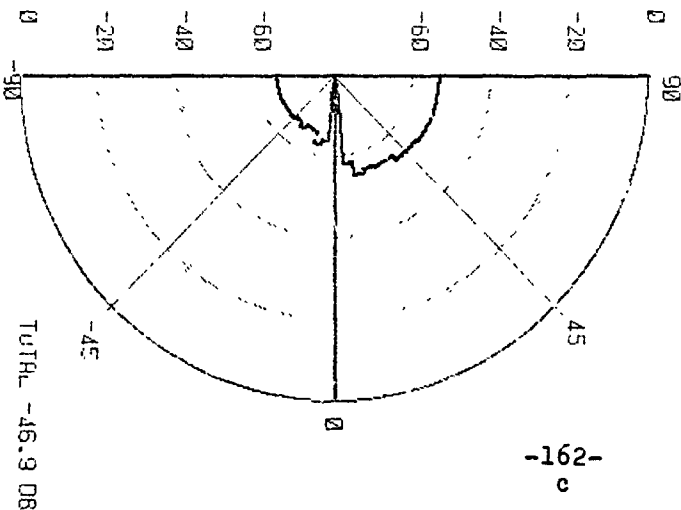
DEPTH IN METERS

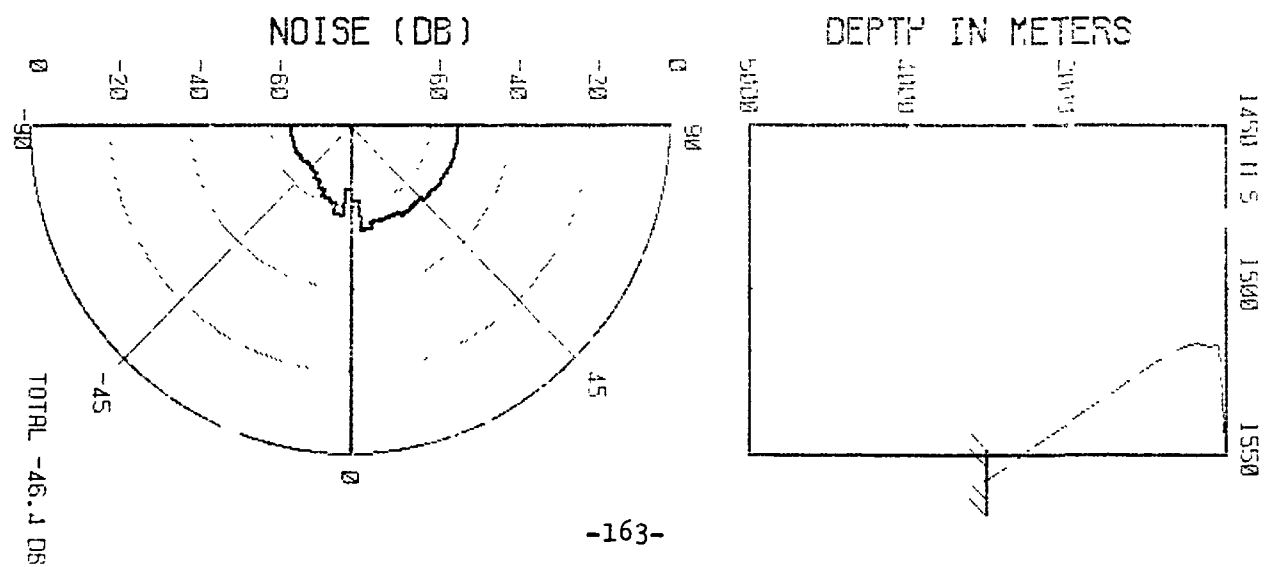
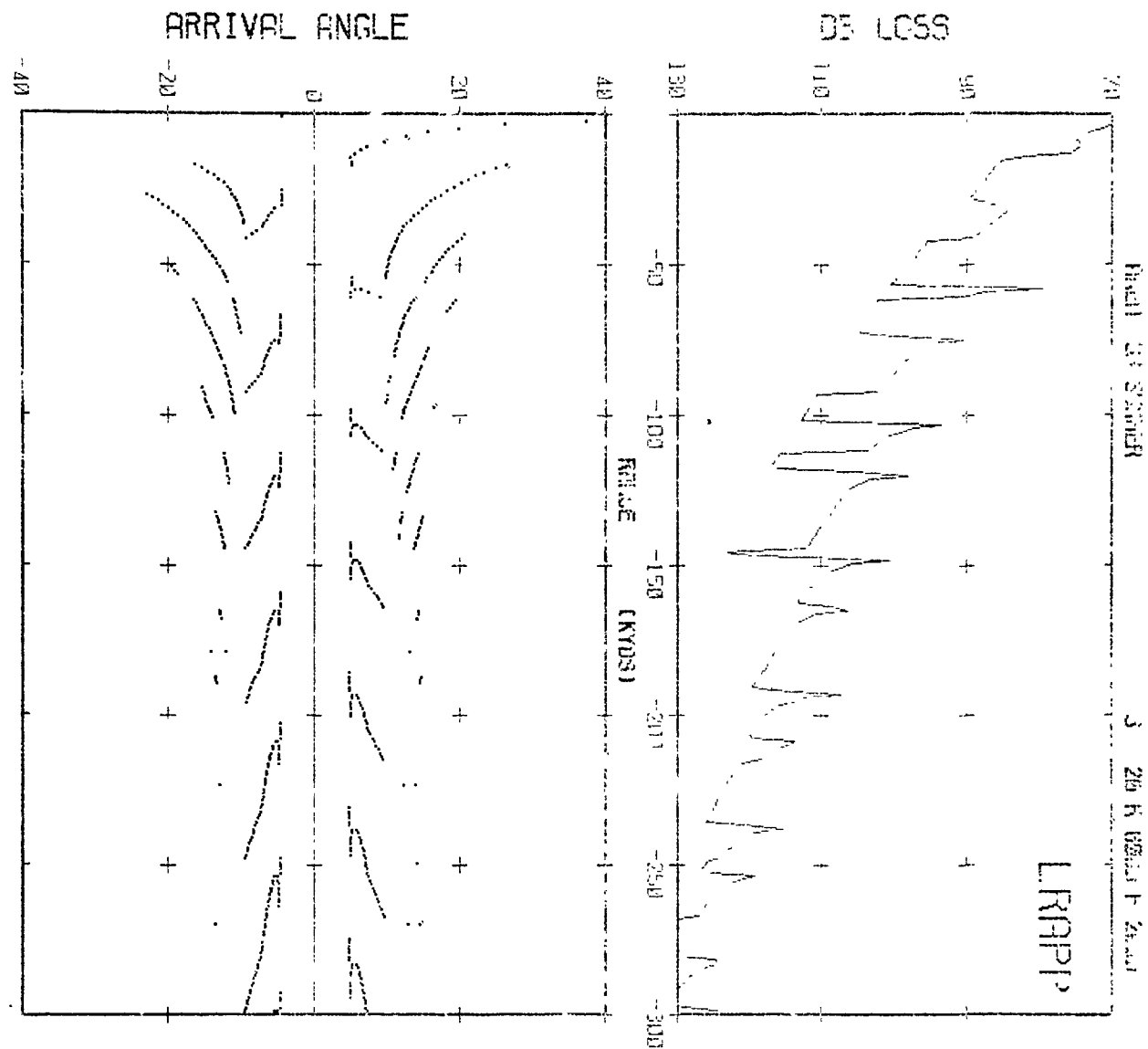


ARRIVAL ANGLE



NOISE (DB)





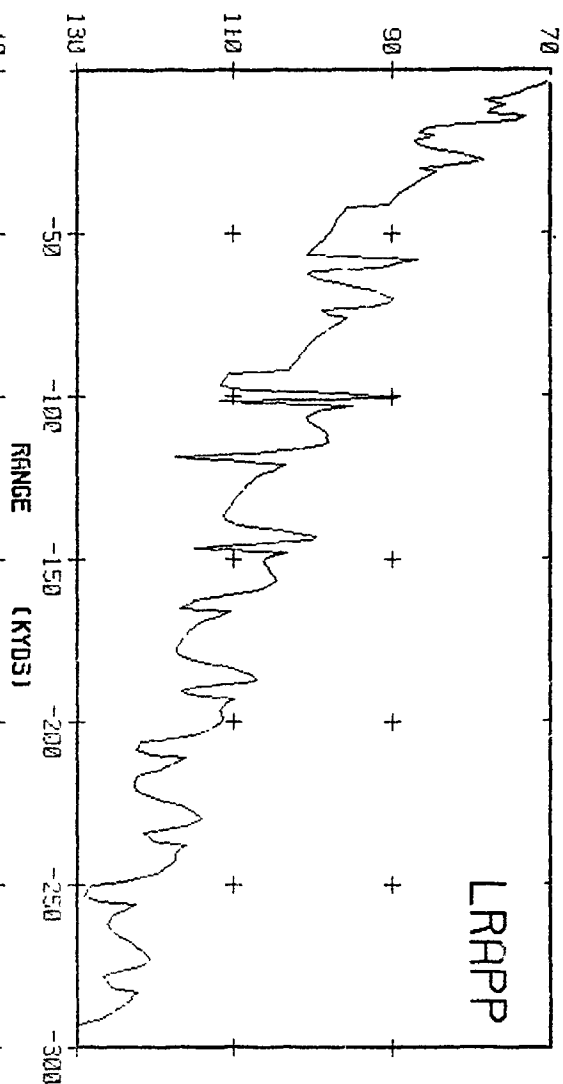
RRER 38 SUMMER

S 50 R 6000 F 2000

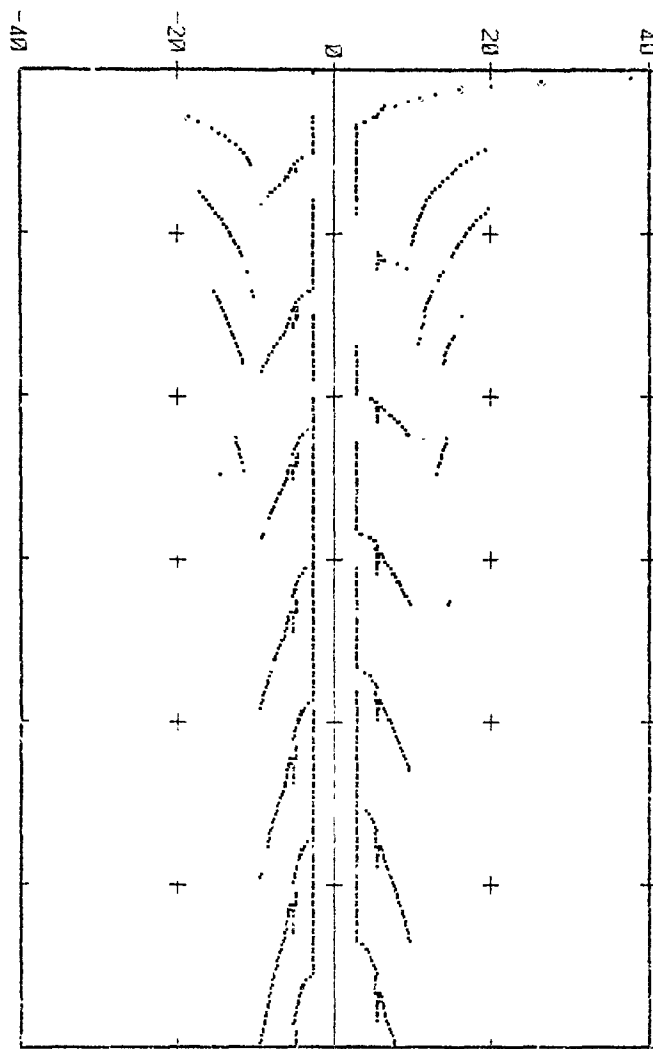
1450 M/S 1500

1550

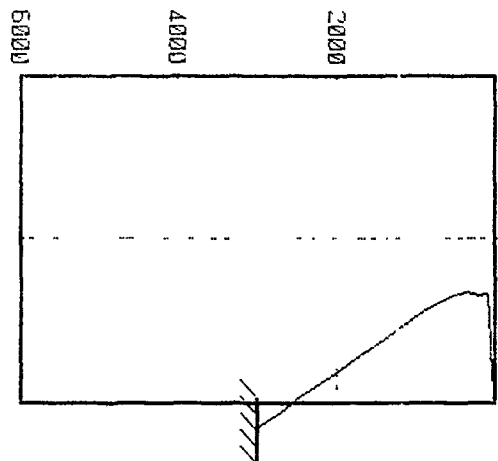
DB LOSS



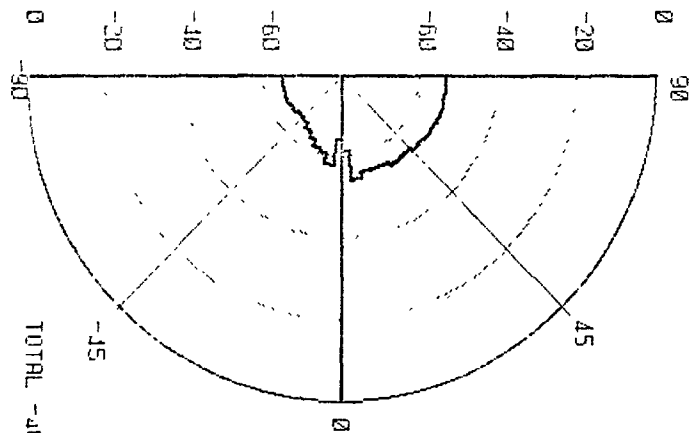
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



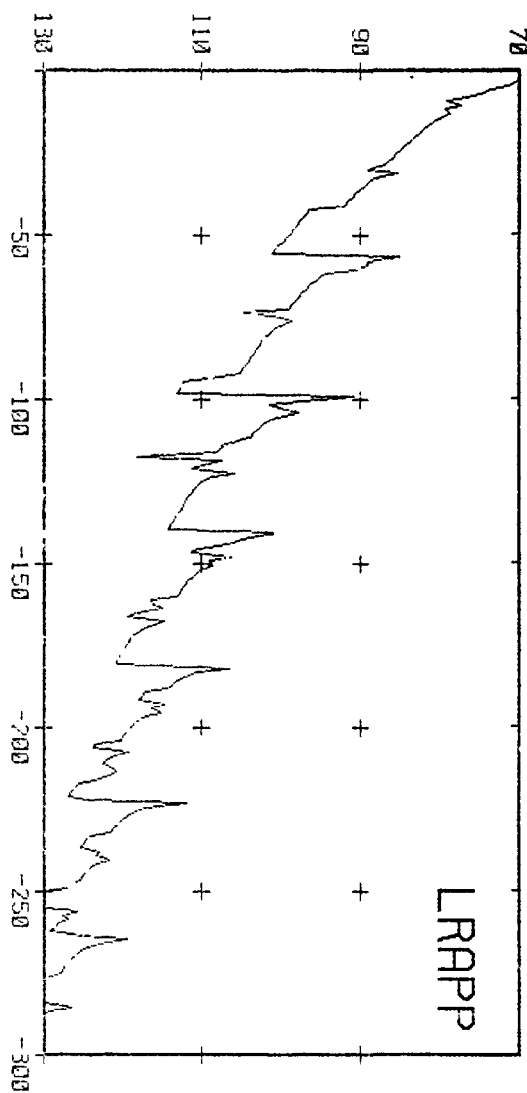
TOTAL -46.1 DB

AREA 38 SUMMER

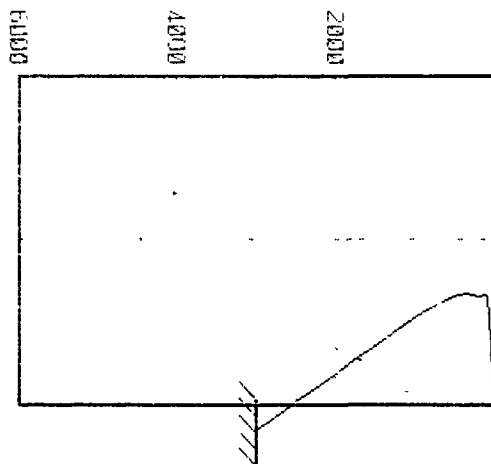
S 233 R 6000 F 2000

1450 M/S 1500 1550

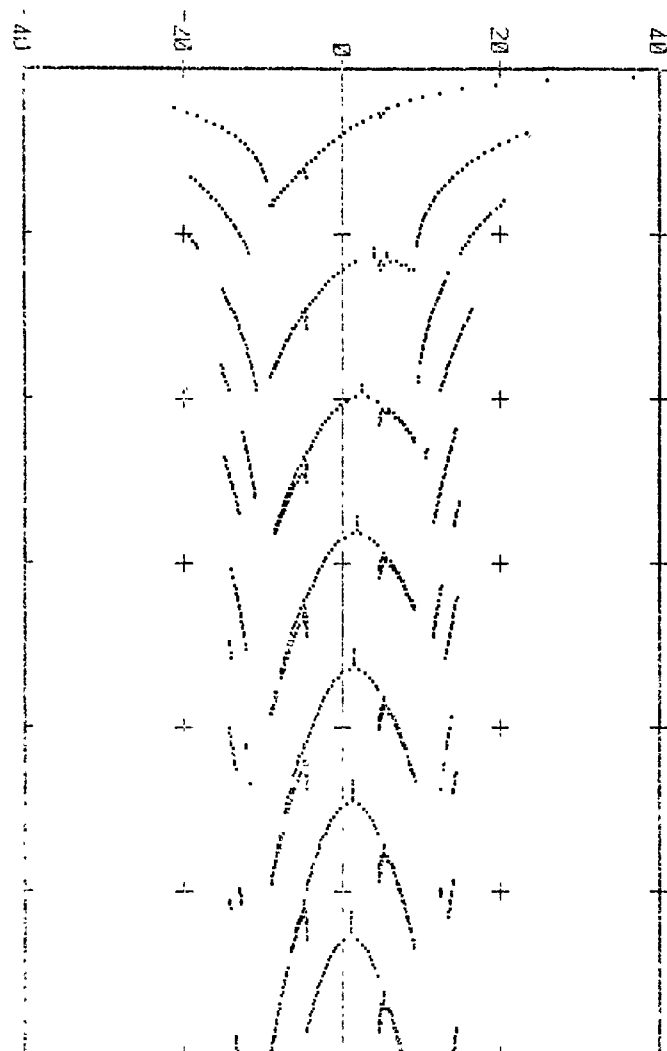
DB LOSS



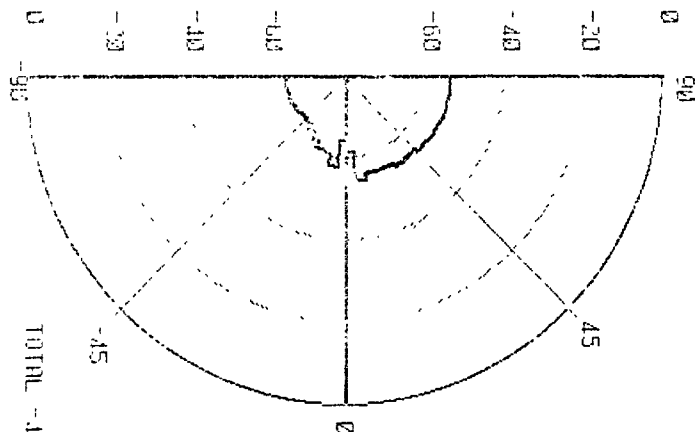
DEPTH IN METERS



ARRIVAL ANGLE



NOISE (DB)

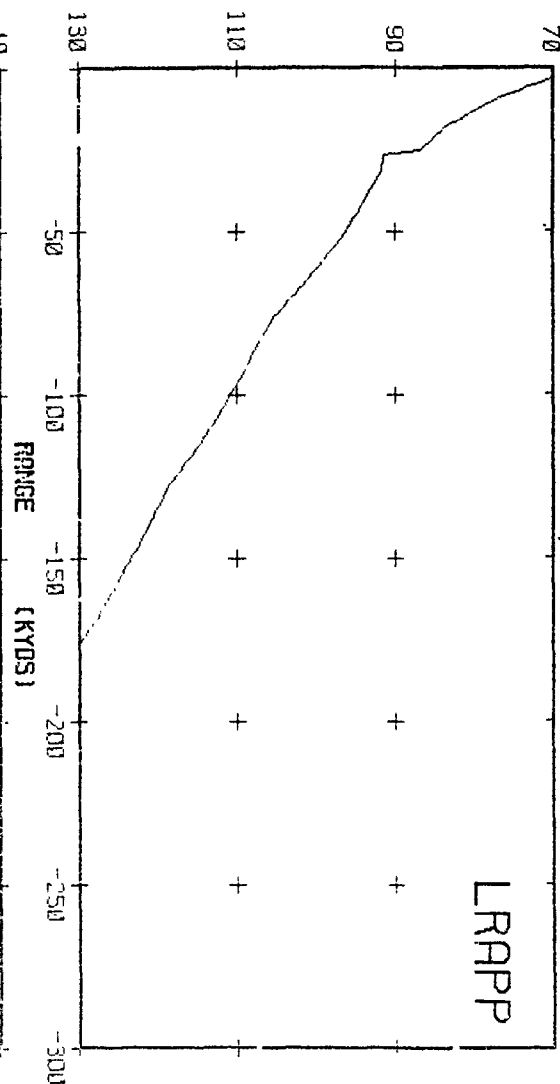


AREA 38 SUMMER

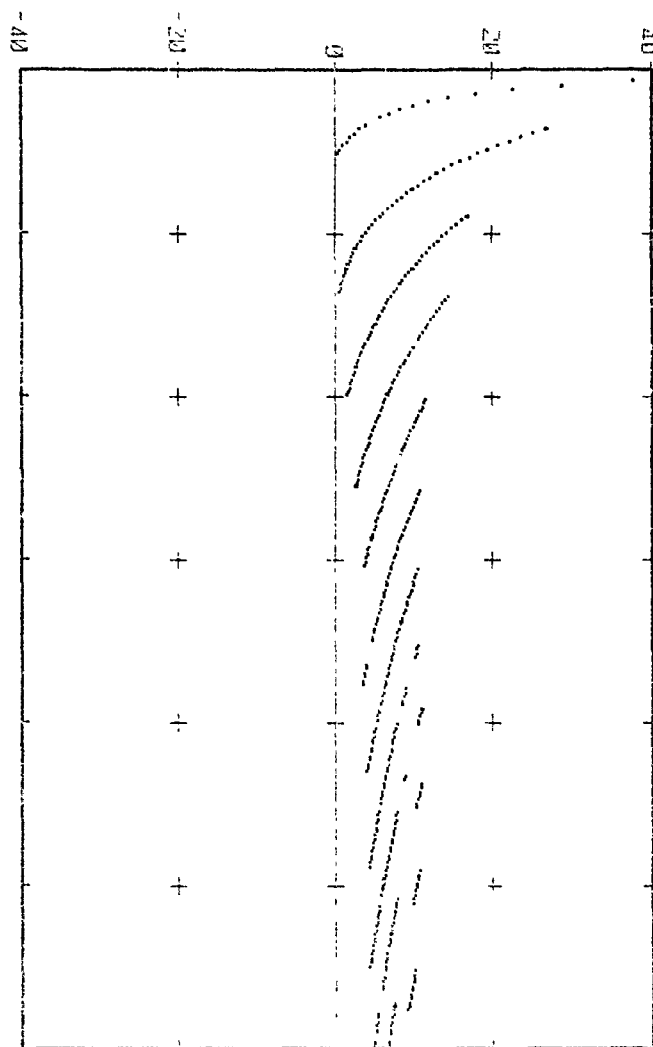
S 20 R 9E42 F 2000

LRAPP

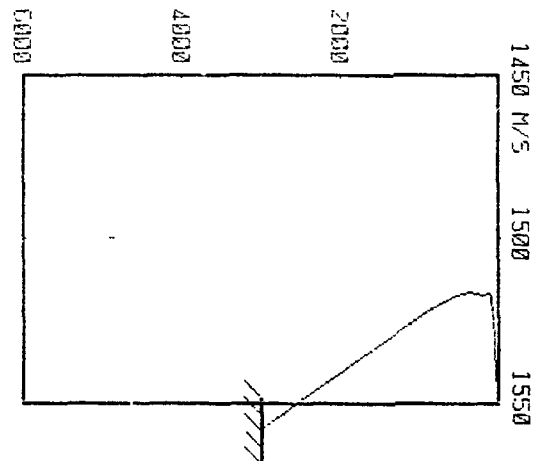
DB LOSS



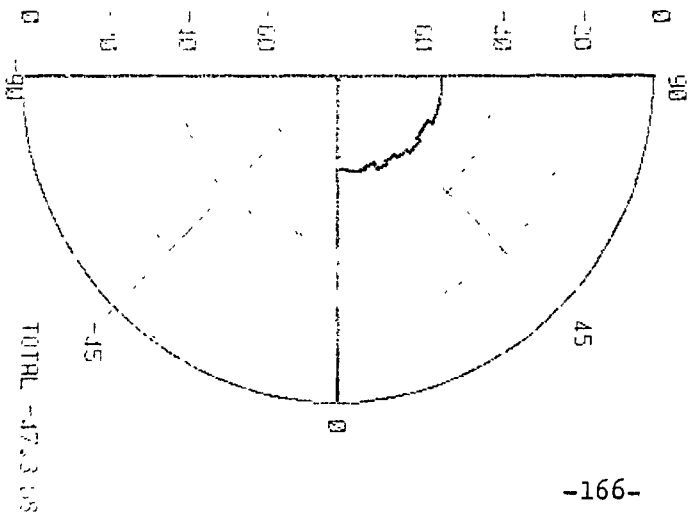
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



PIKER 38 SUMMER

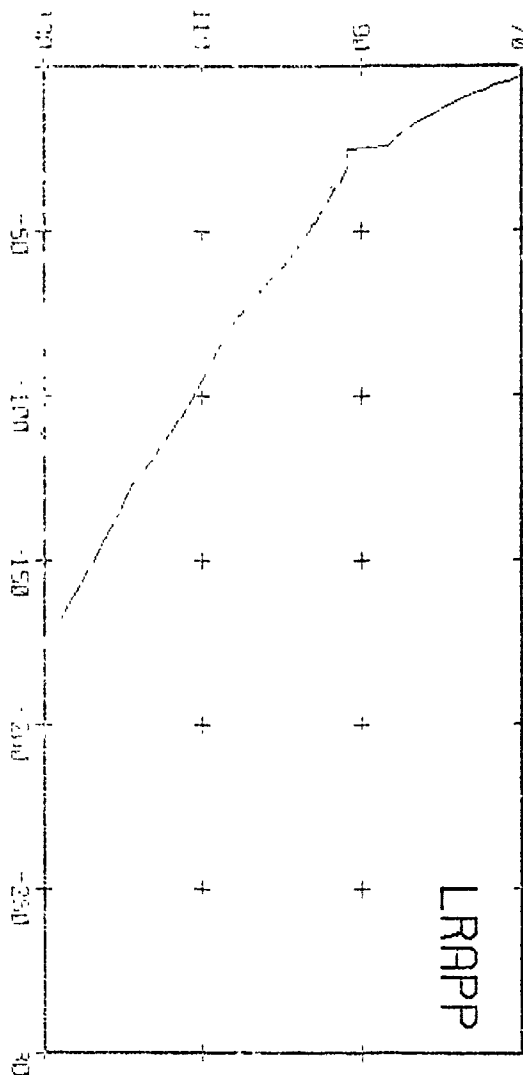
S 50 R 9842 F 2000

1450 M/S

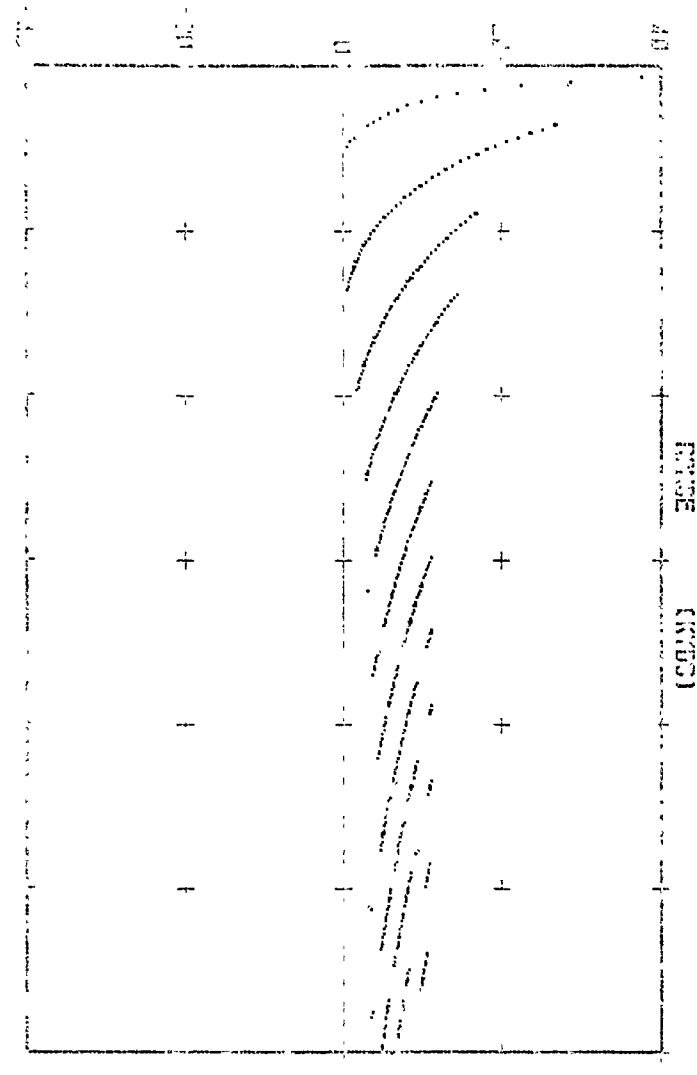
1500

1550

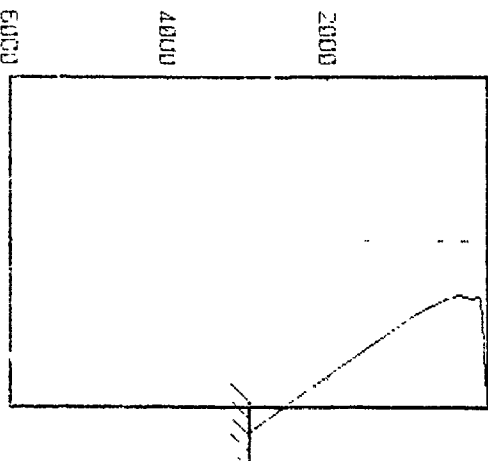
DB LOSS



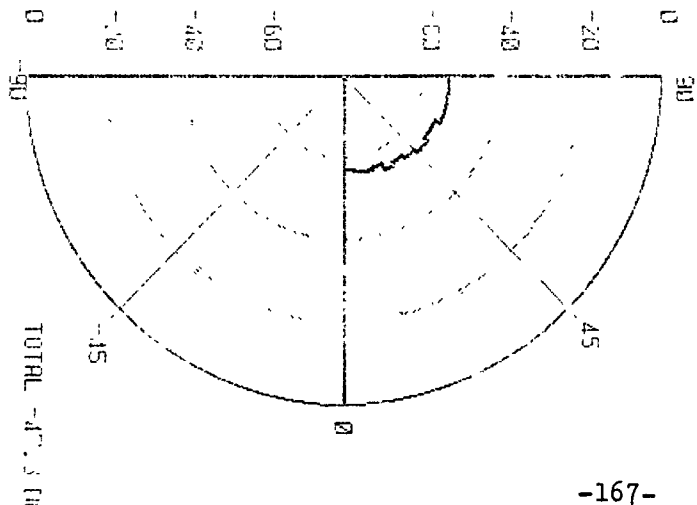
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



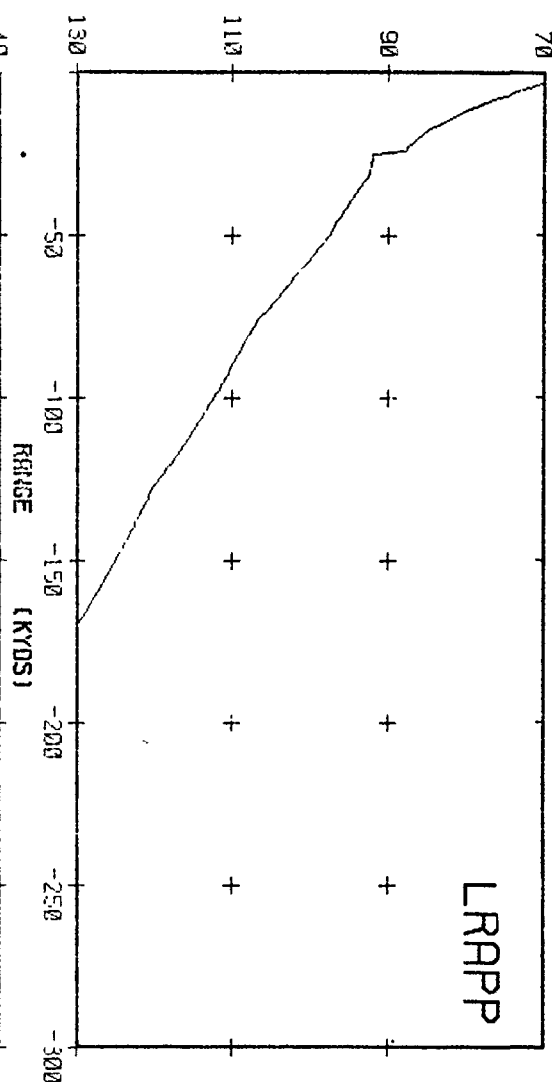


AREA 3B SUMMER

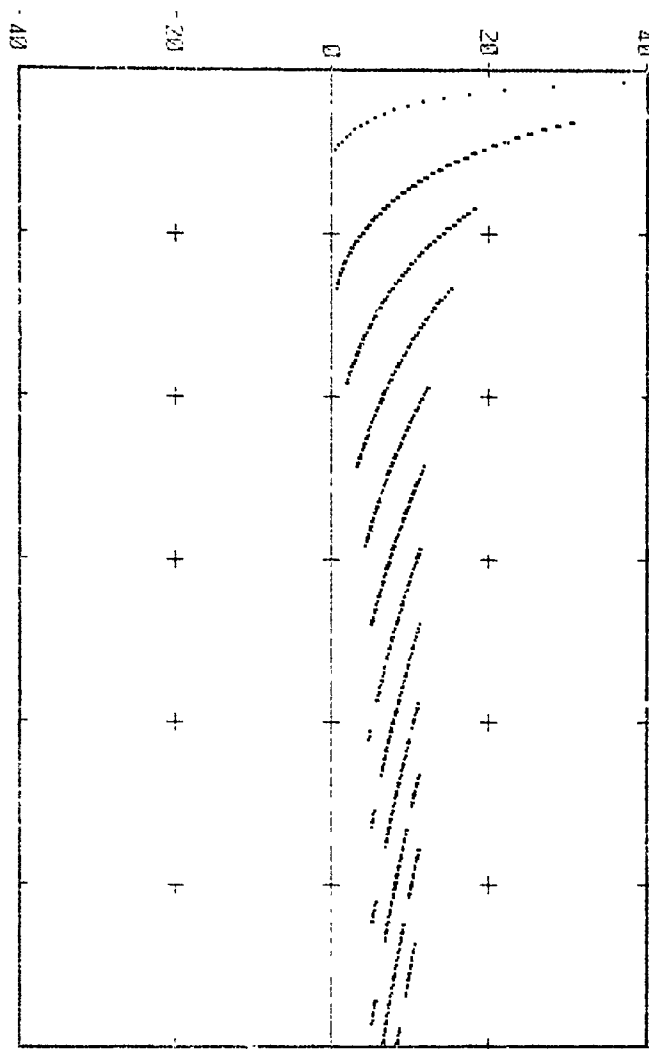
S 233 R 9842 F 2000

LRAPP

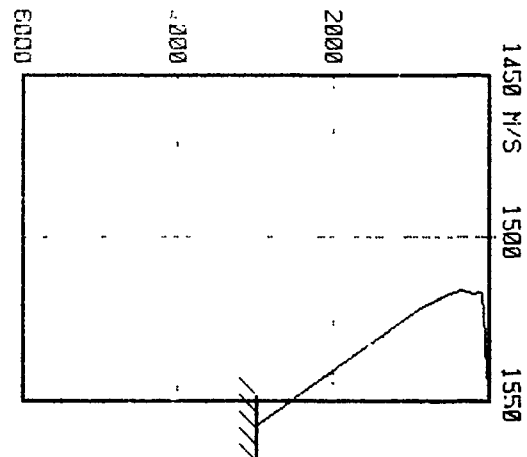
DB LOSS



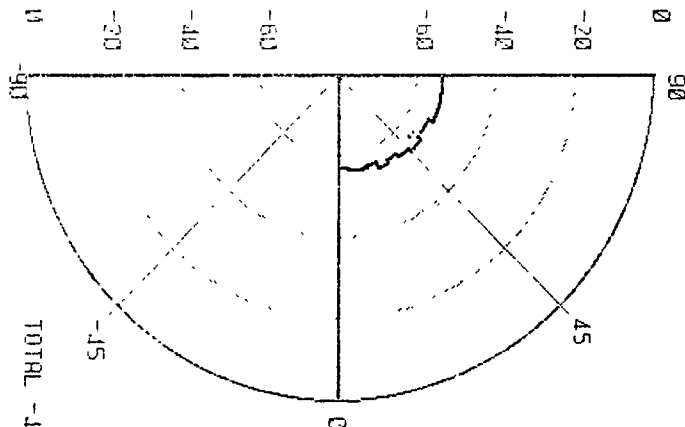
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

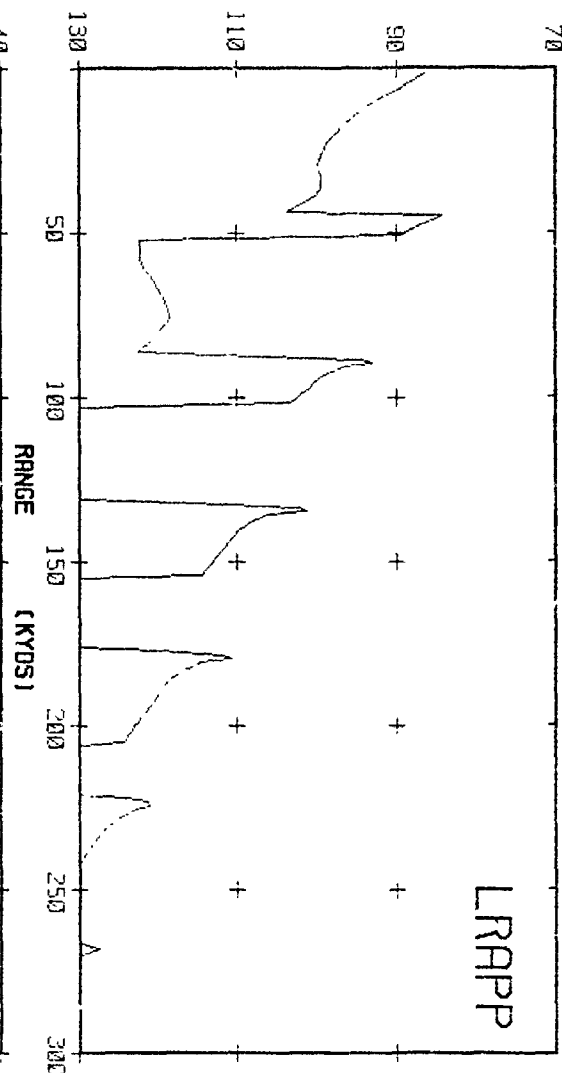


FIRE 38 SUMMER

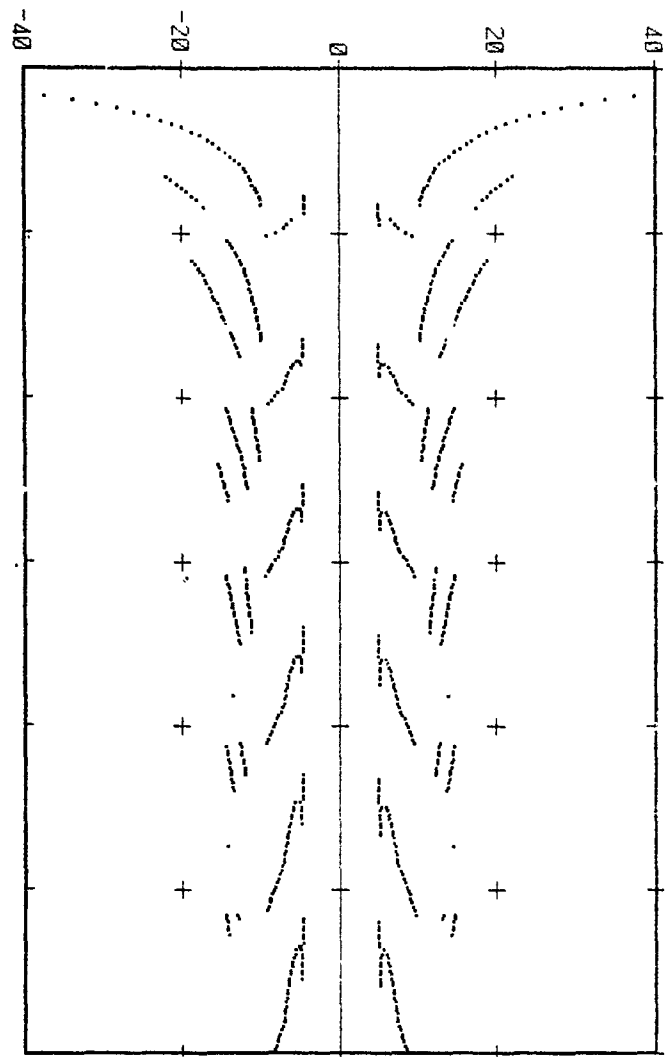
S 20 R 60 F 2500

1450 M/S 1500 1550

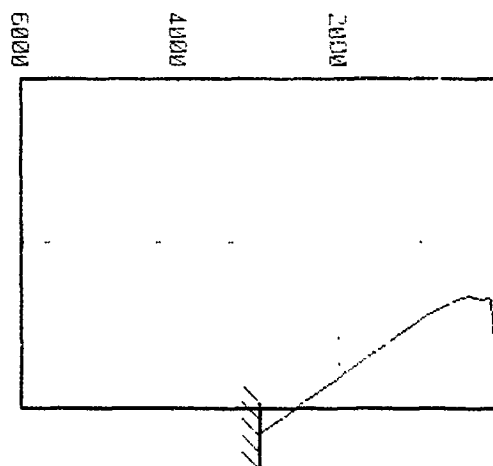
DB LOSS



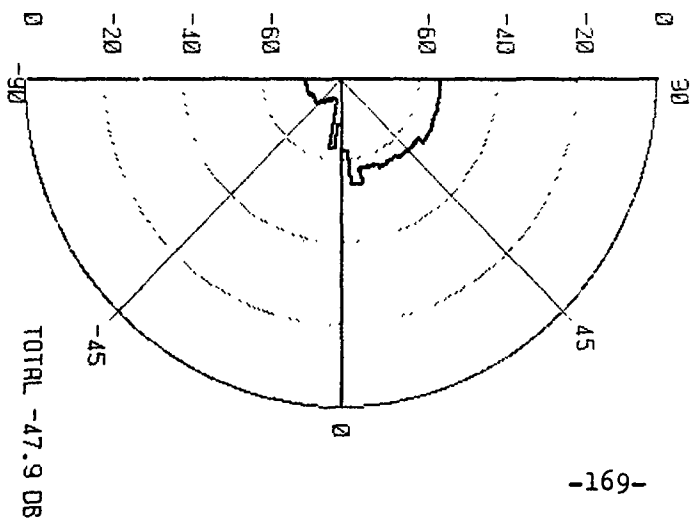
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

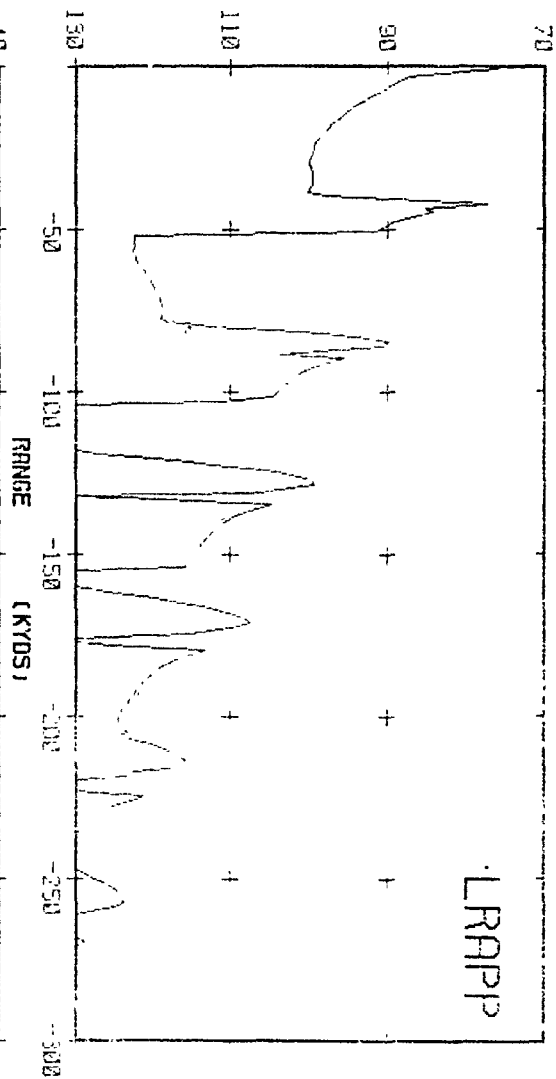


AREA 33 SUMMER

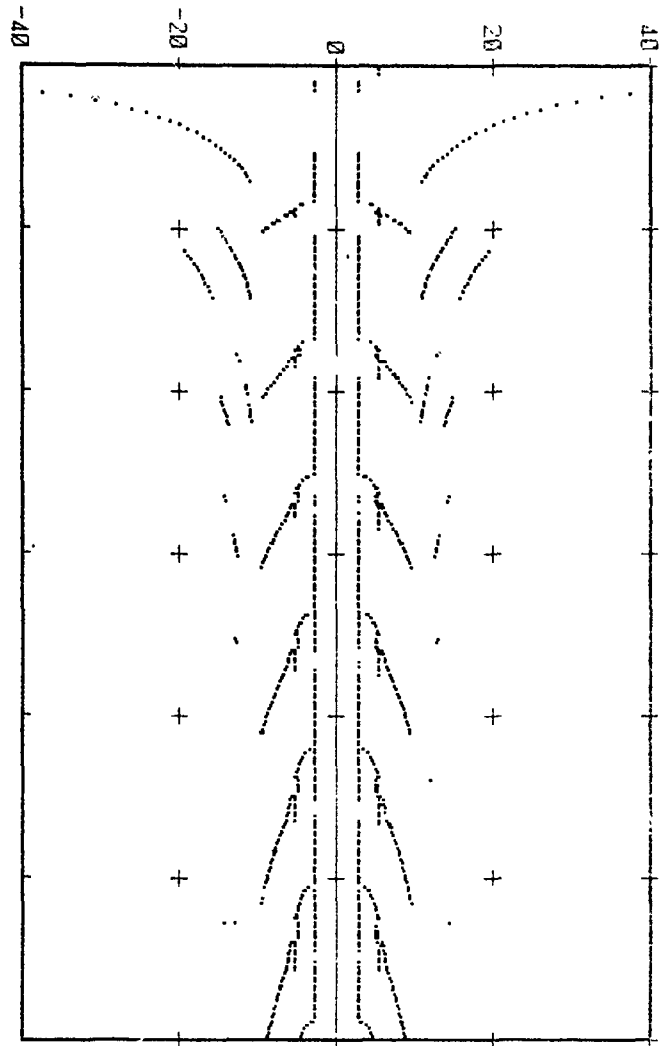
S 50 R 60 F 2500

LRAPP

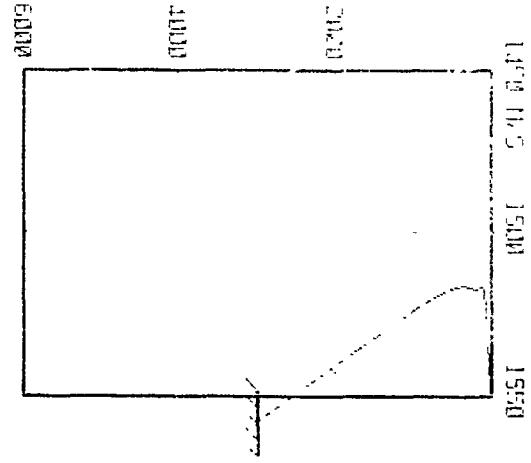
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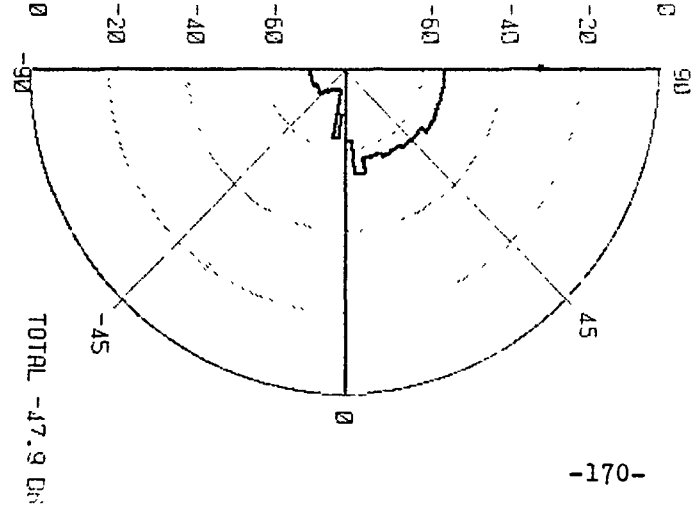
ARRIVAL ANGLE

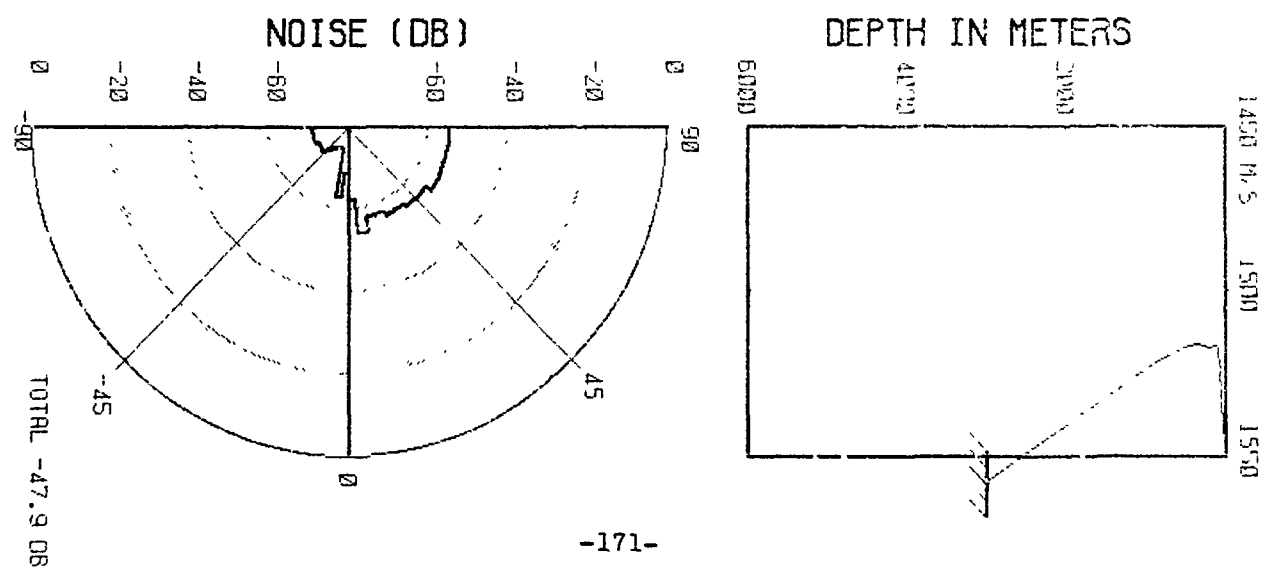
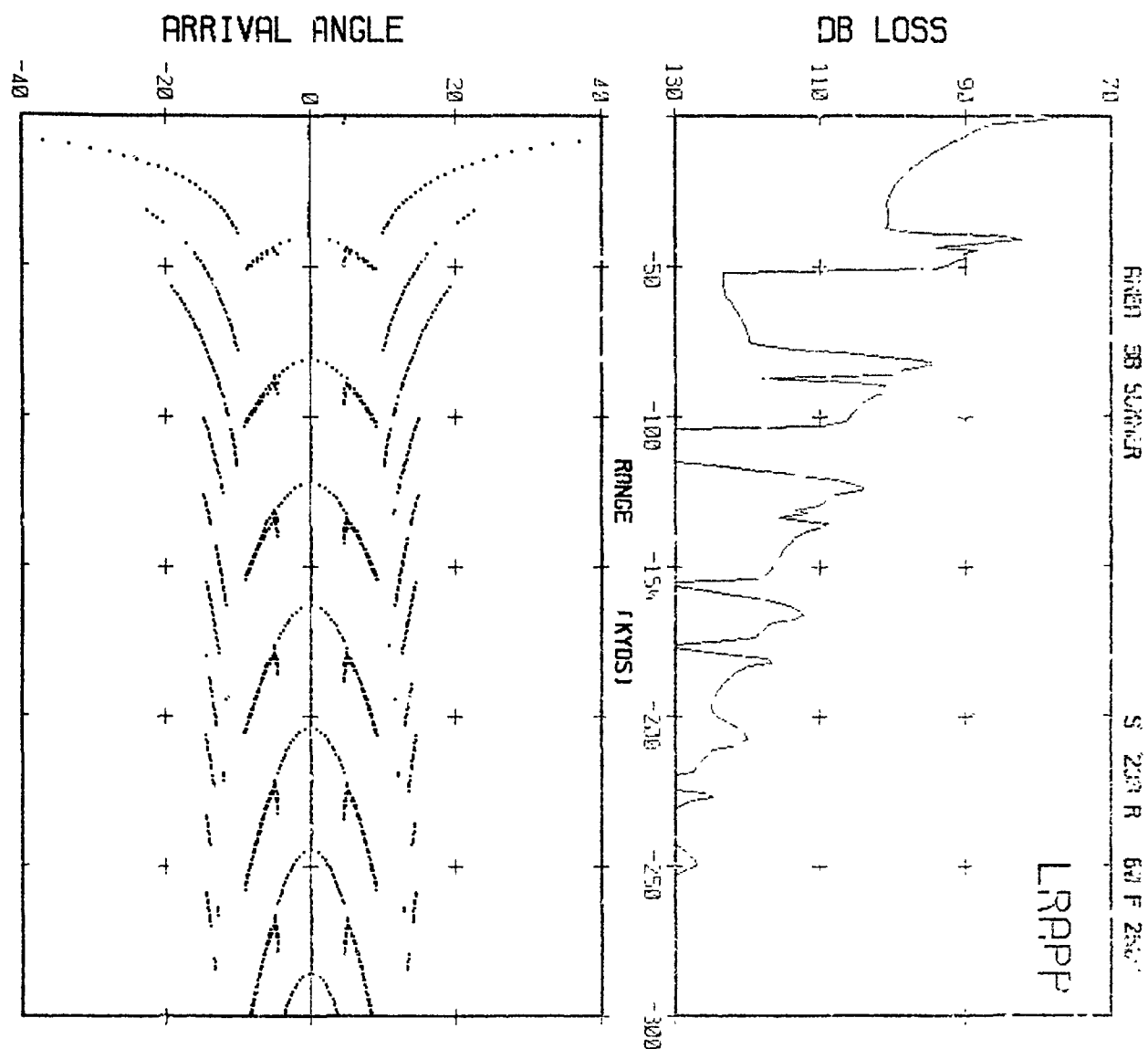


DEPTH IN METERS



NOISE (DB)



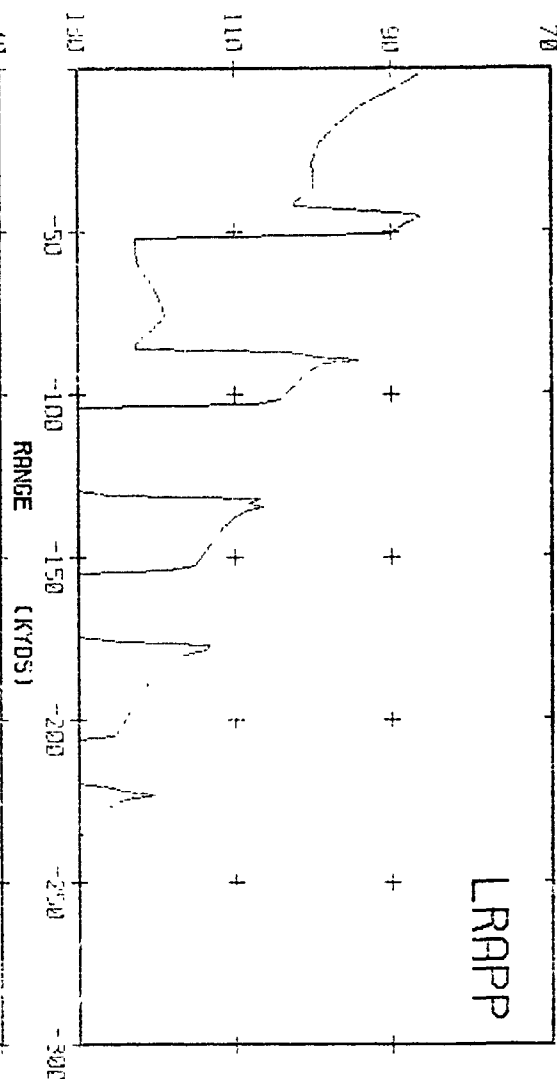


RRR 38 SUMMER

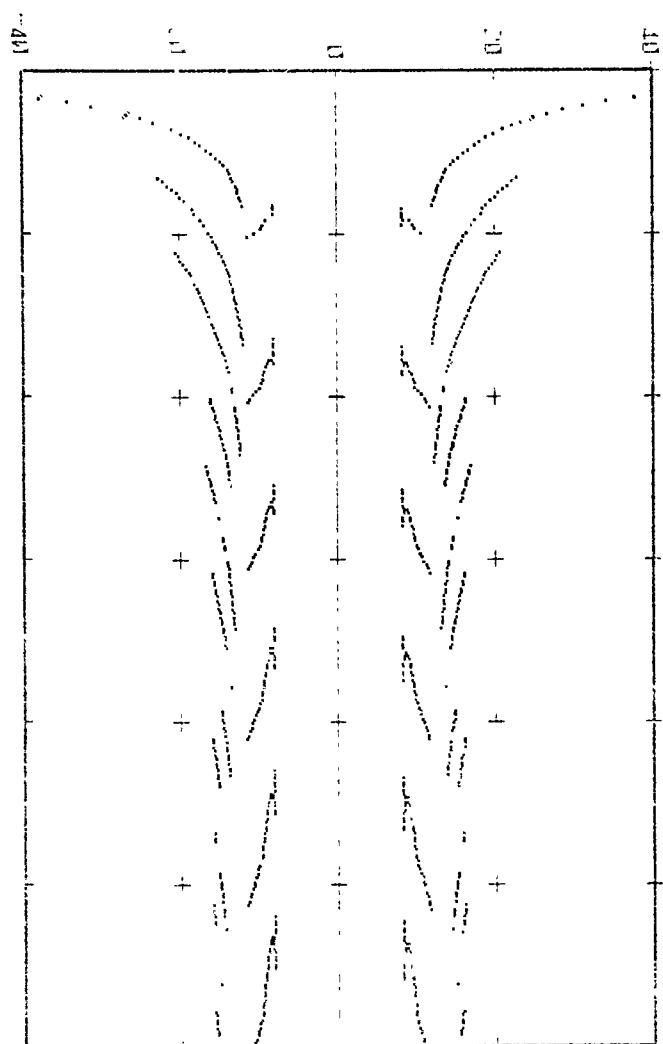
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1450 M/S 1500 1550

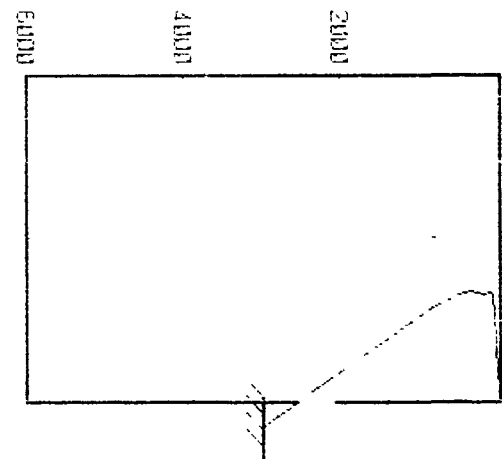
DB LOSS



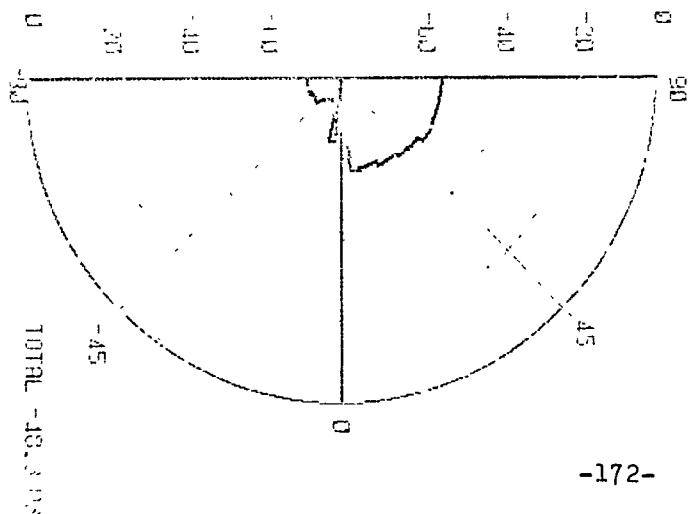
ARRIVAL ANGLE



DEPTH IN METERS

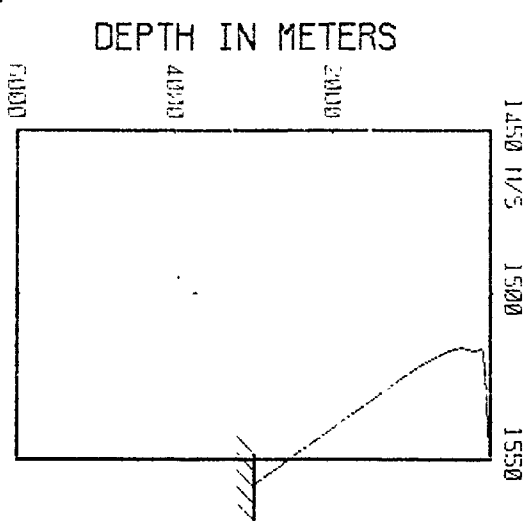
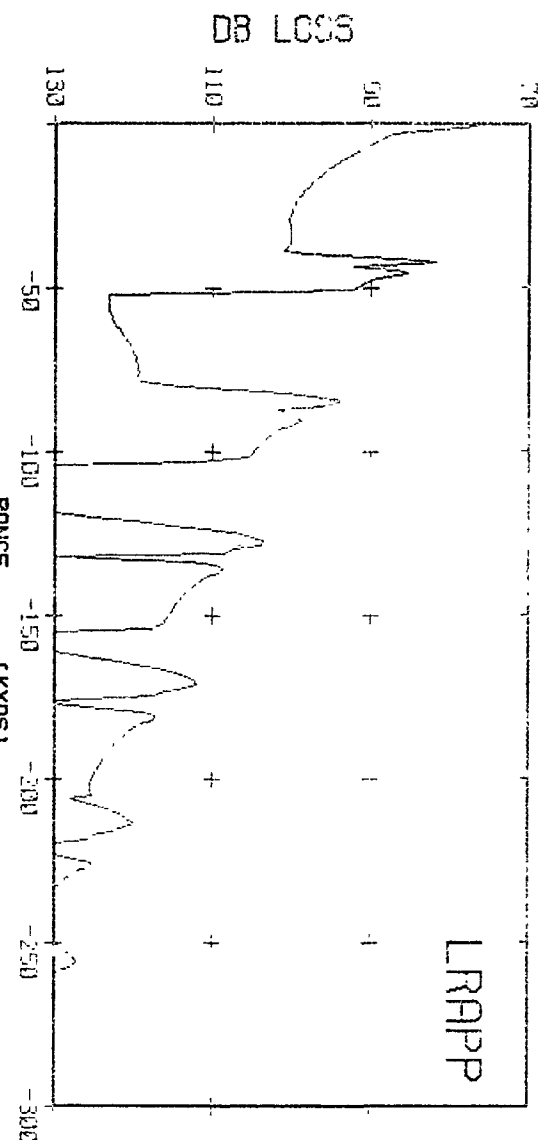


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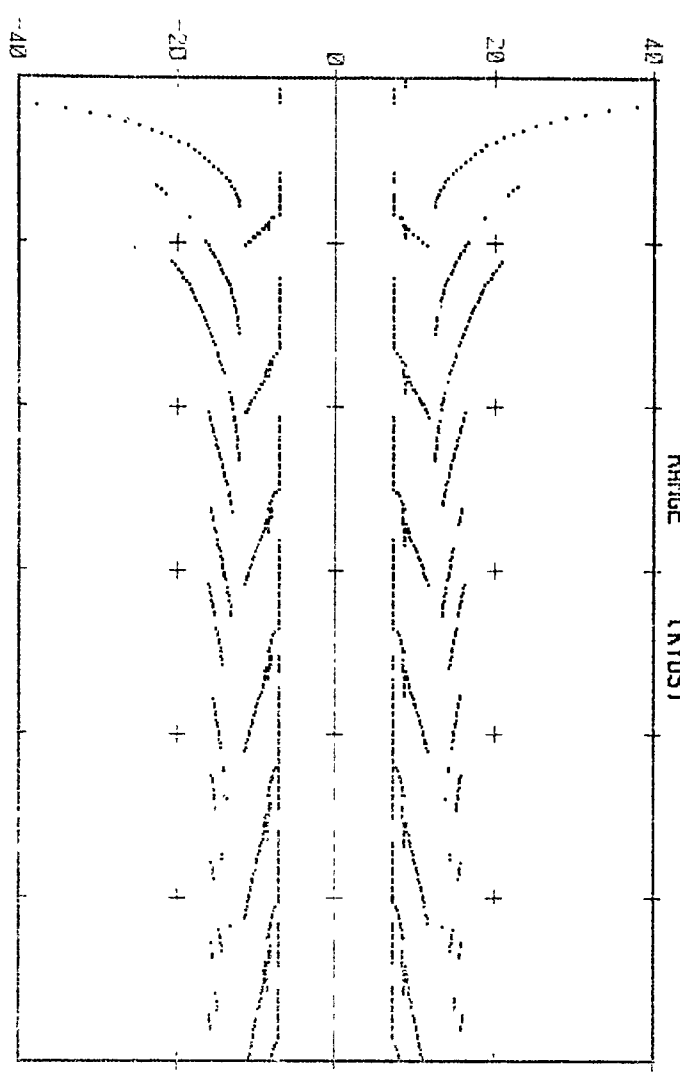


RIVER 30 0000 R S 500 133 F 2500

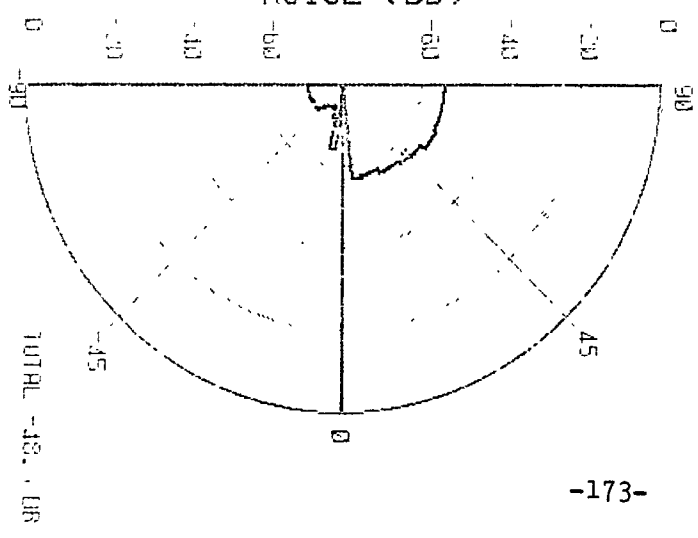
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ARRIVAL ANGLE



NOISE (DB)

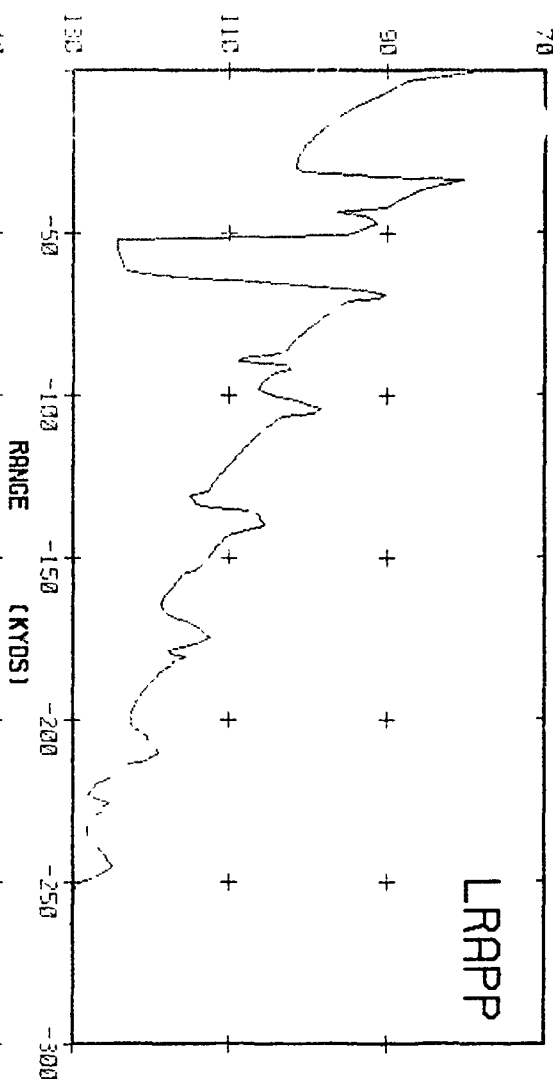


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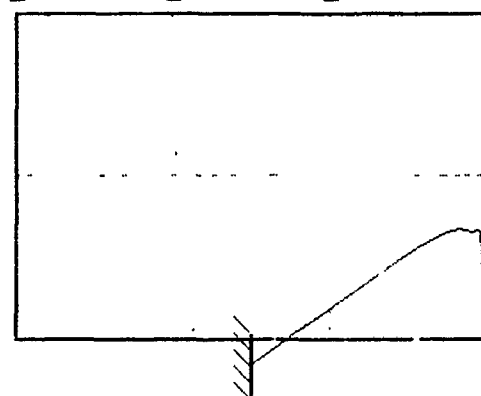
S 233 R 133 F 2500

1450 M/S 1500 1550

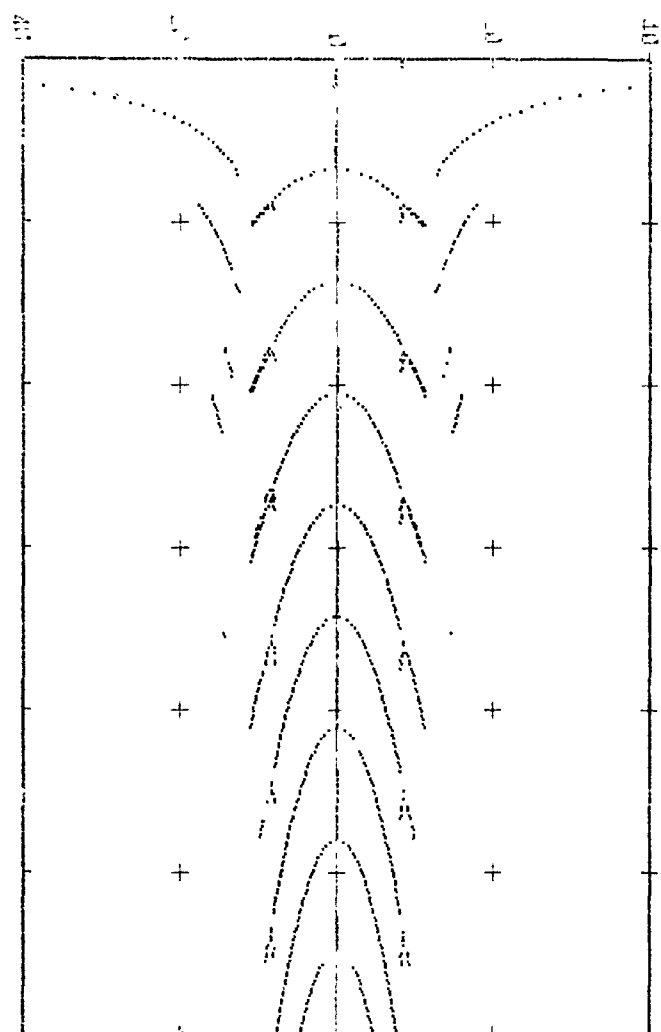
DB LOSS



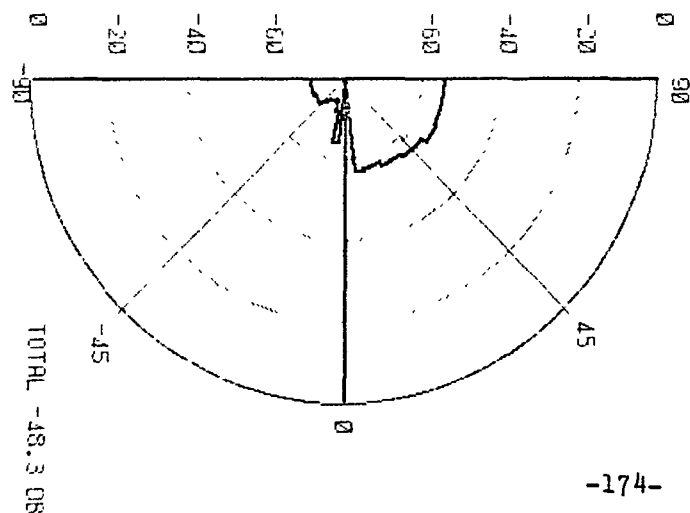
DEPTH IN METERS

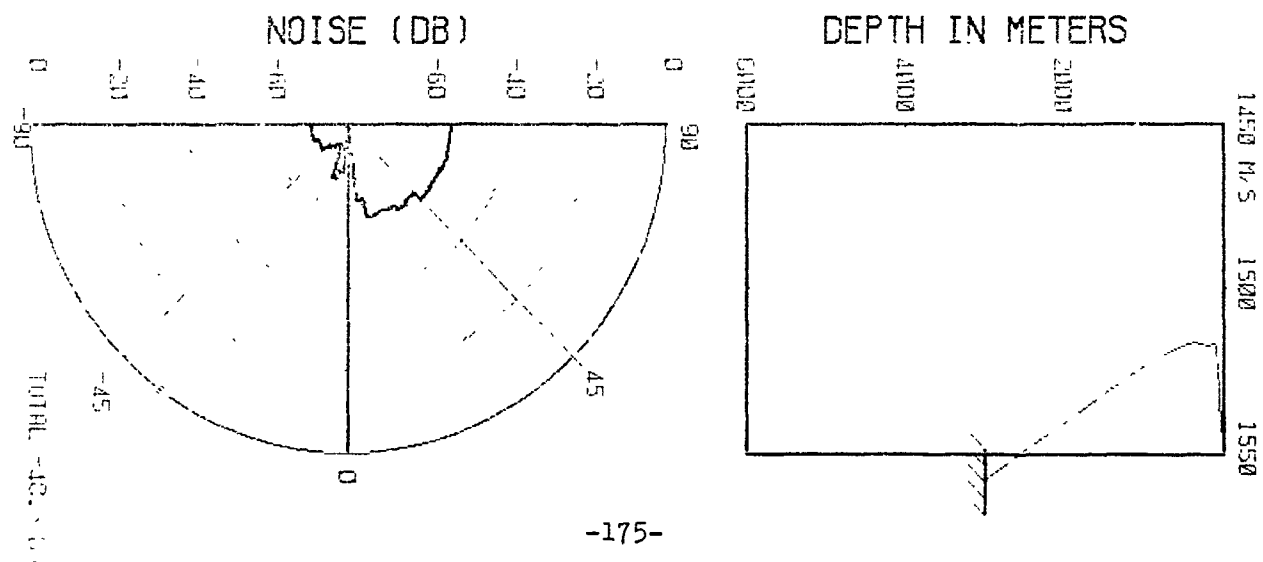
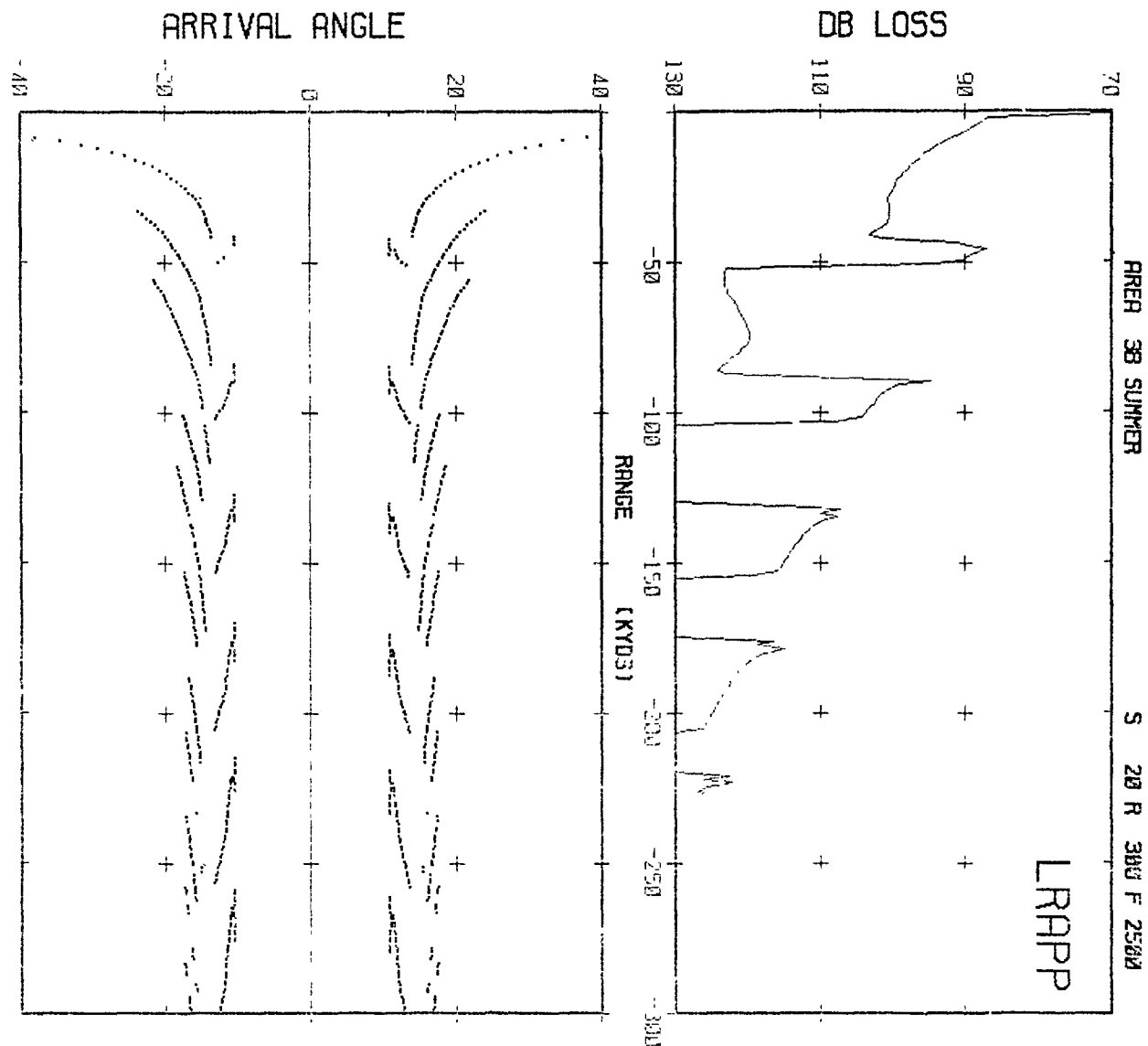


ARRIVAL ANGLE



NOISE (DB)







AREA 3B SUMMER

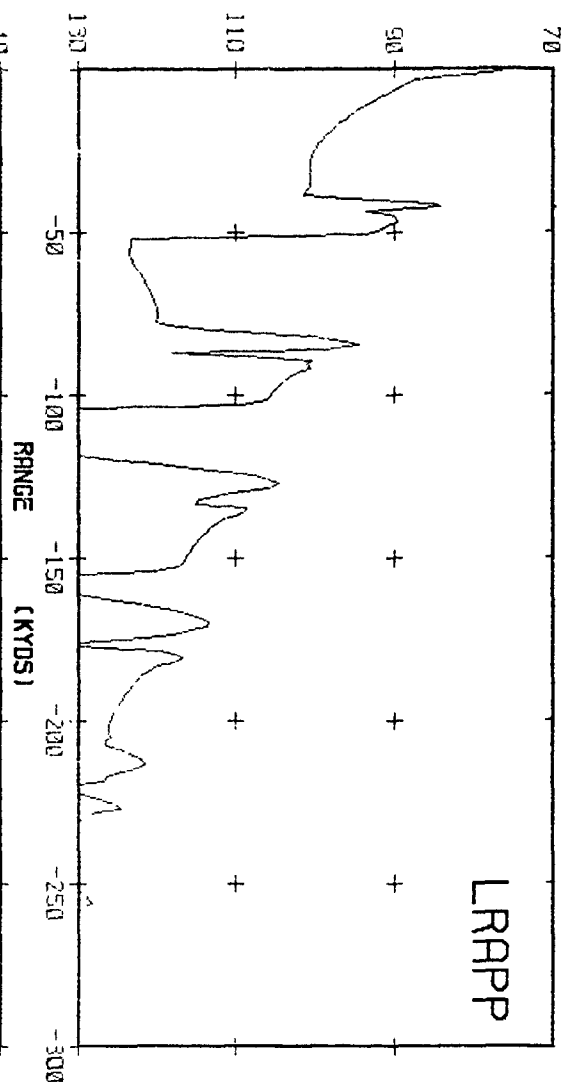
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1450 M/S

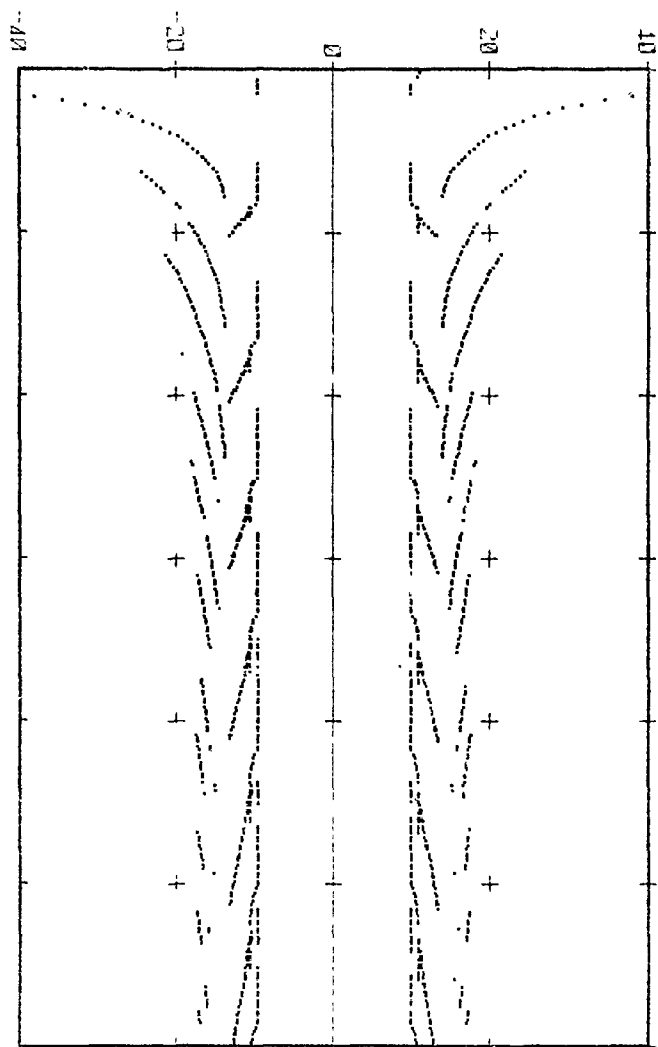
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1550

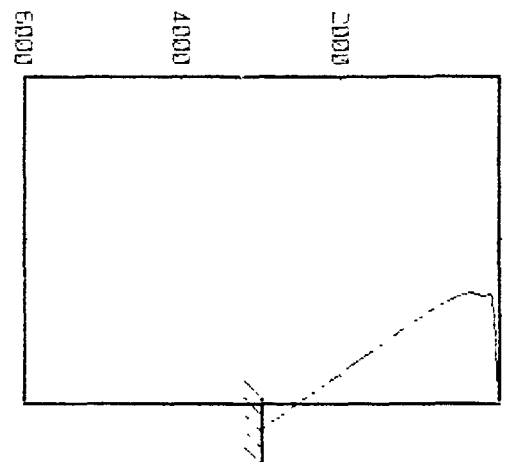
DB LOSS



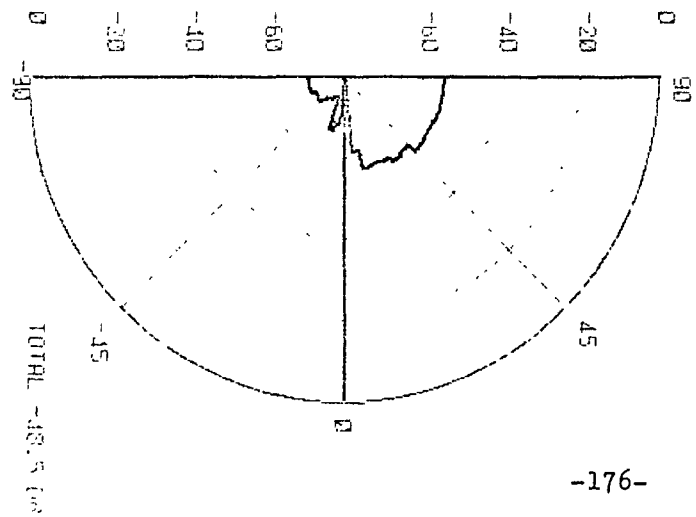
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

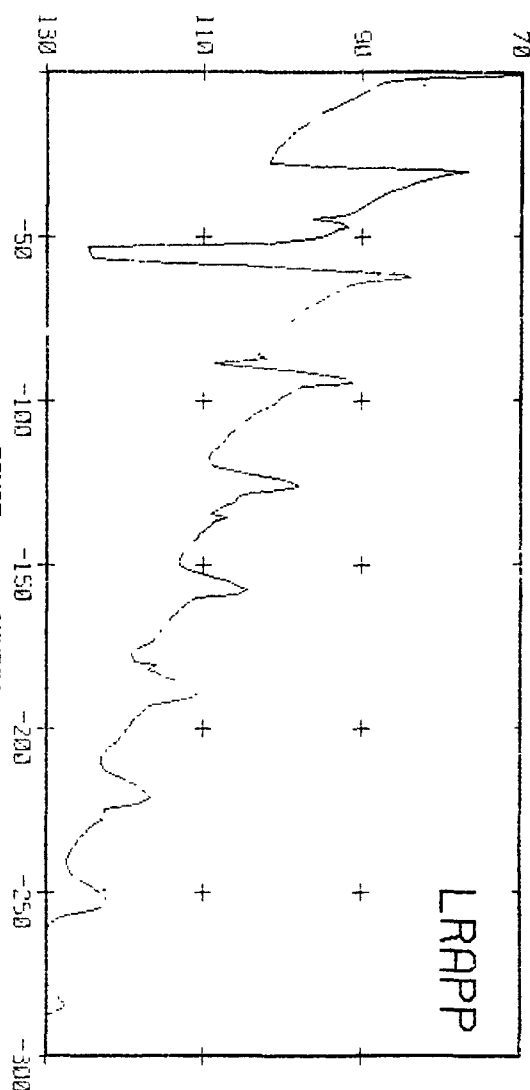


ARER 38 SUMMER

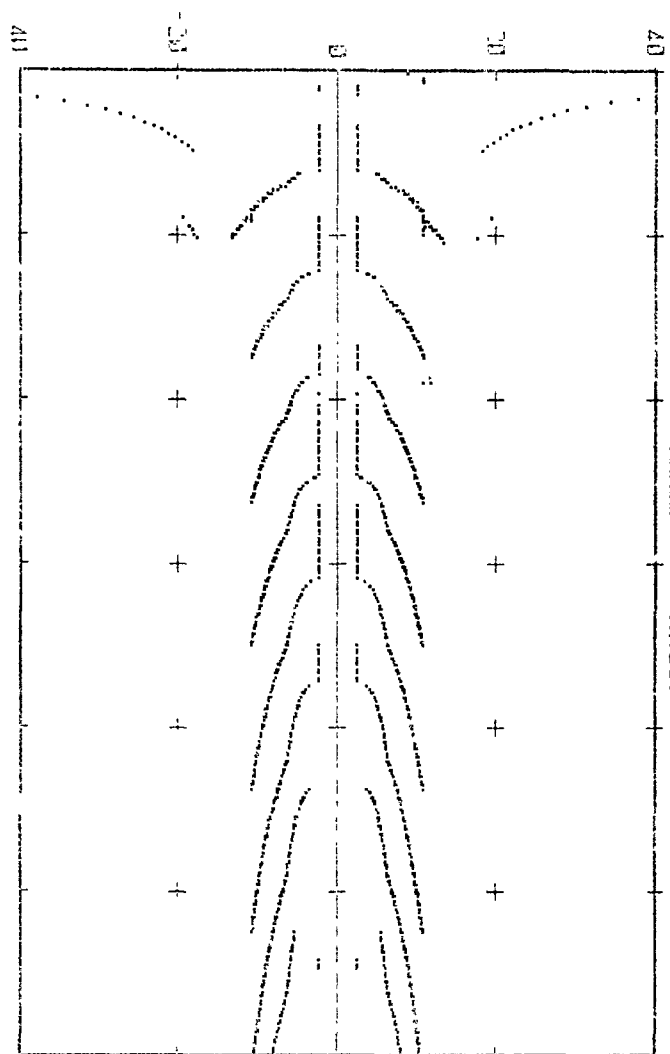
S 233 R 300 F 2500

1450 M/S 1500 1550

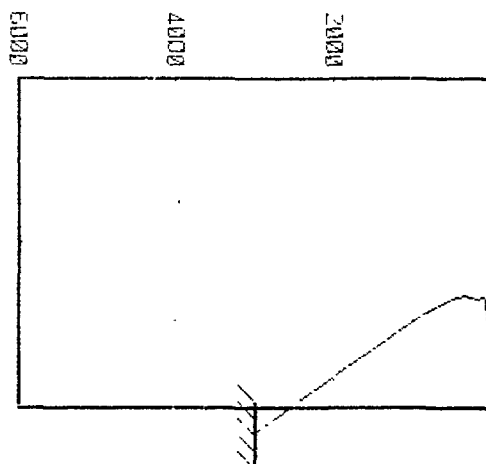
DB LOSS



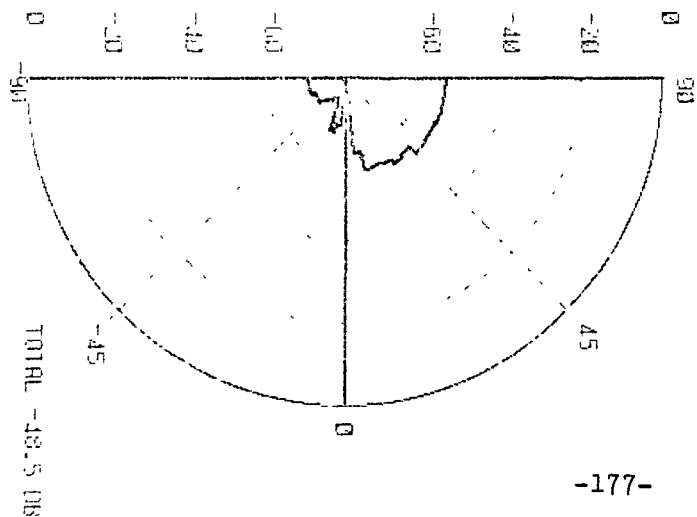
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



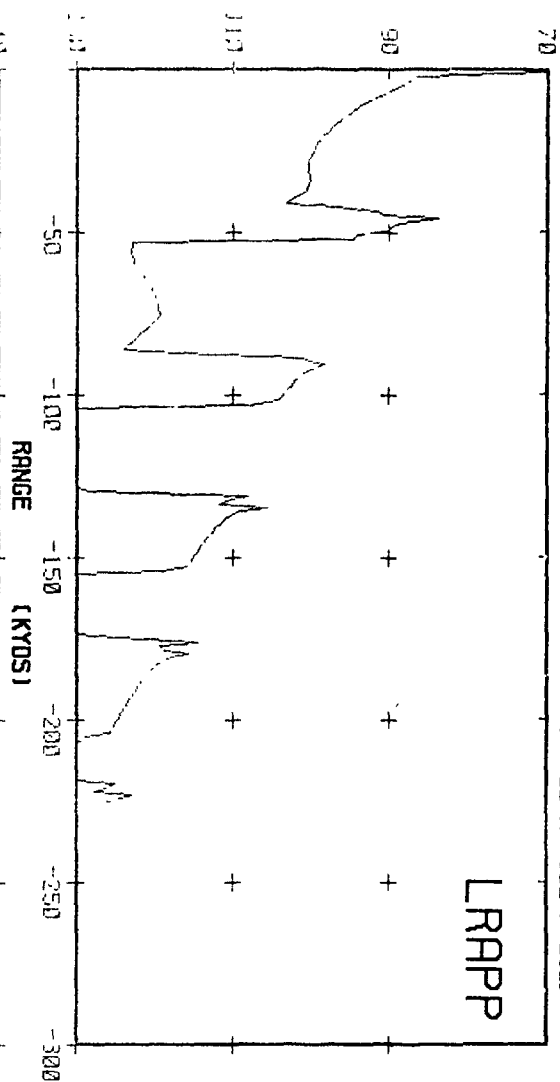
PRER 38 SUMMER

S 20 R 600 F 2500

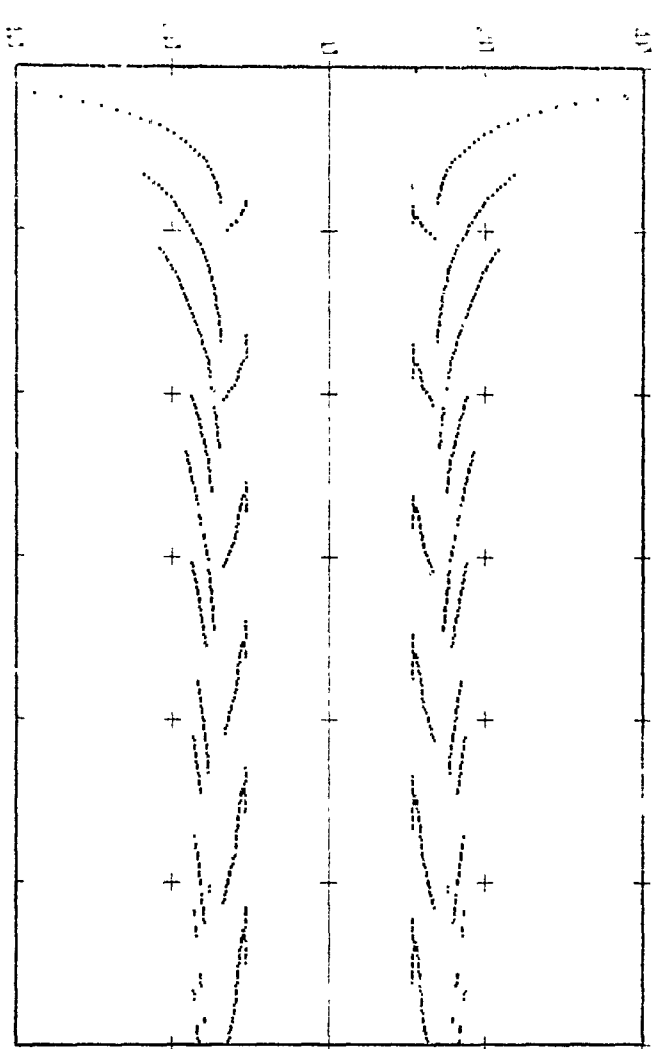
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1550

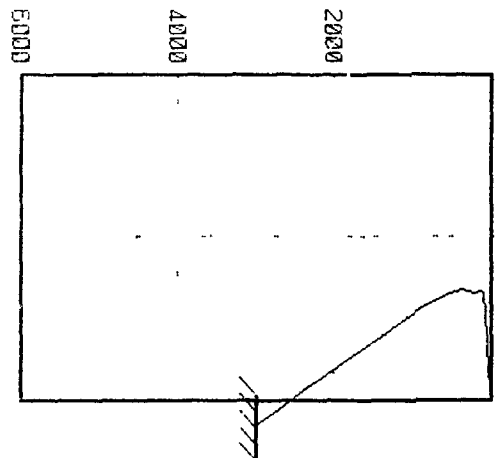
DB LOSS



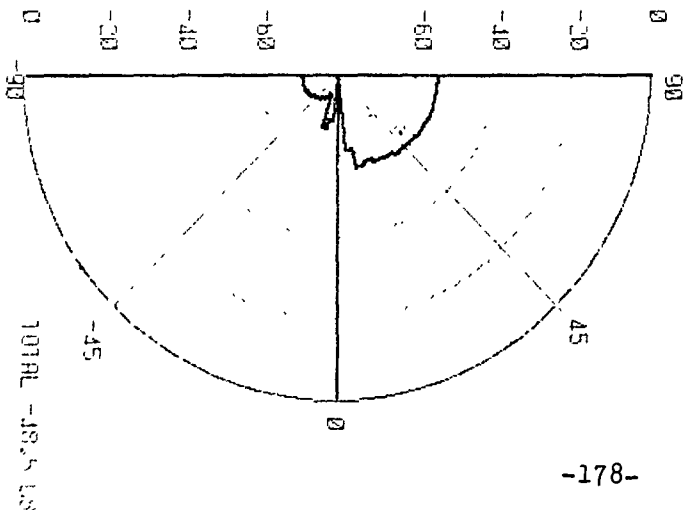
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

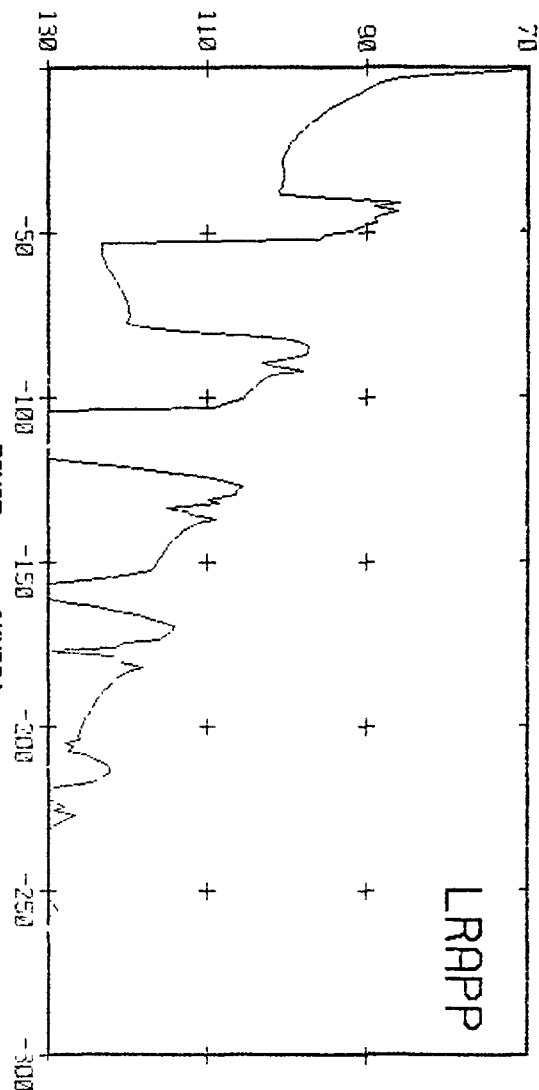


AREA 38 SUMMER

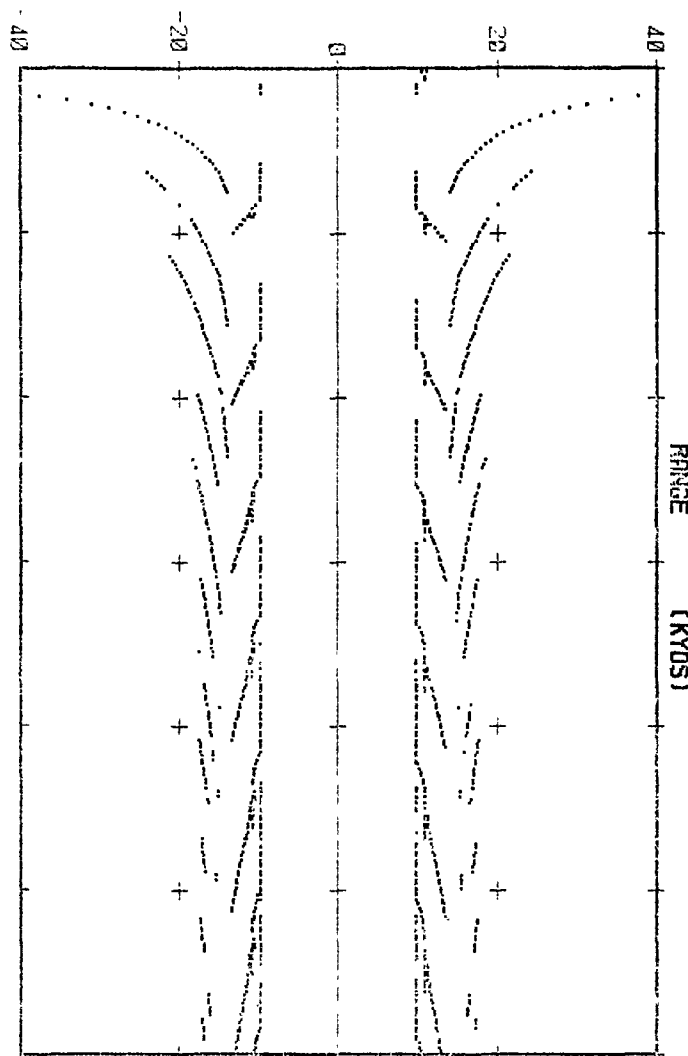
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1450 11/5 1500 1550

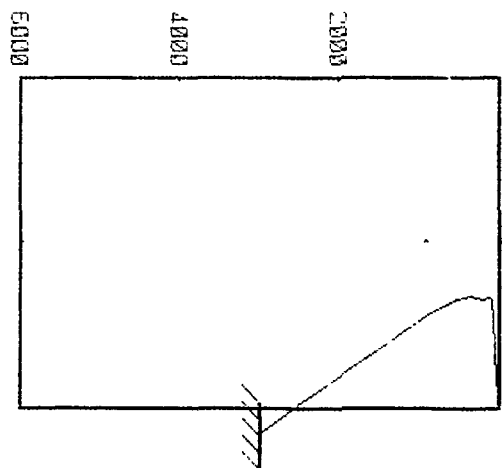
DB LOSS



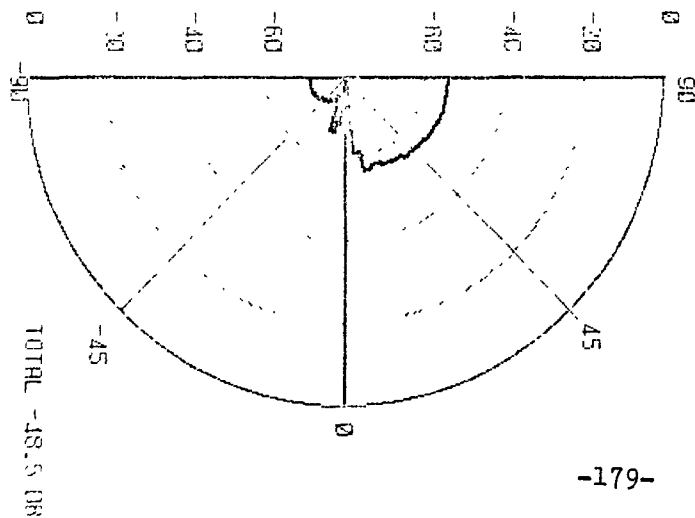
ARRIVAL ANGLE

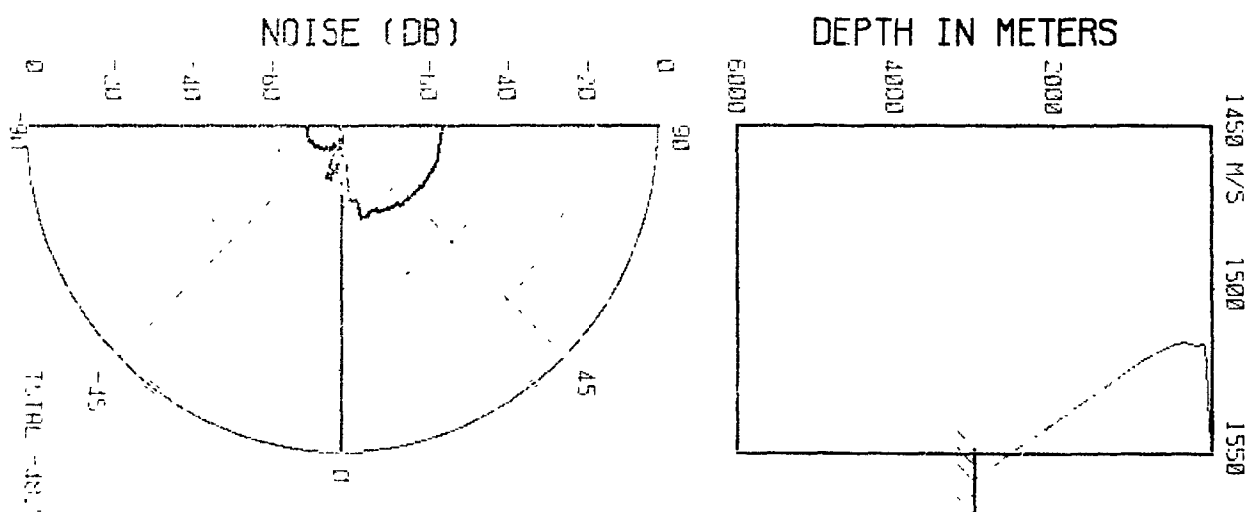
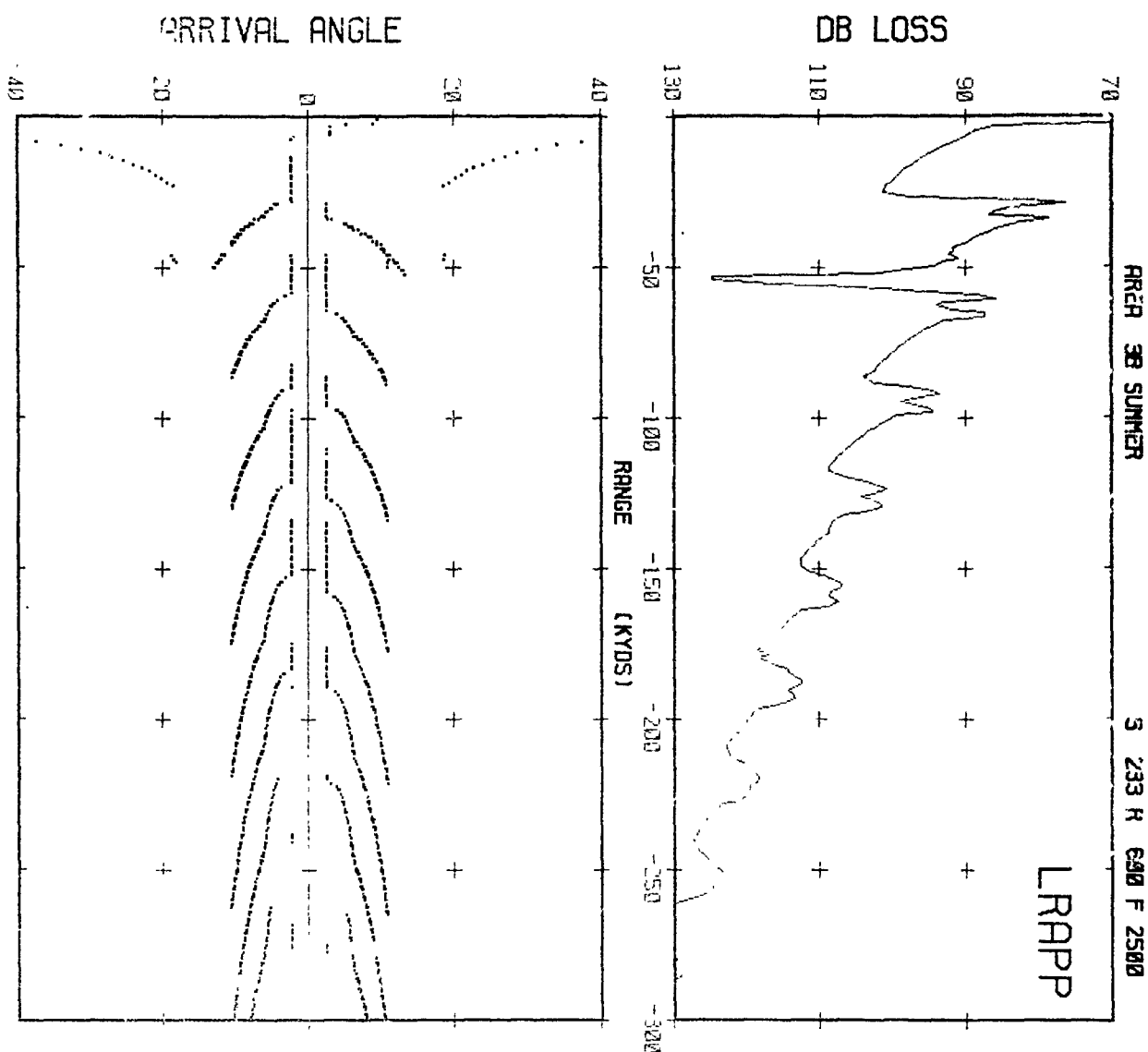


DEPTH IN METERS



NOISE (DB)



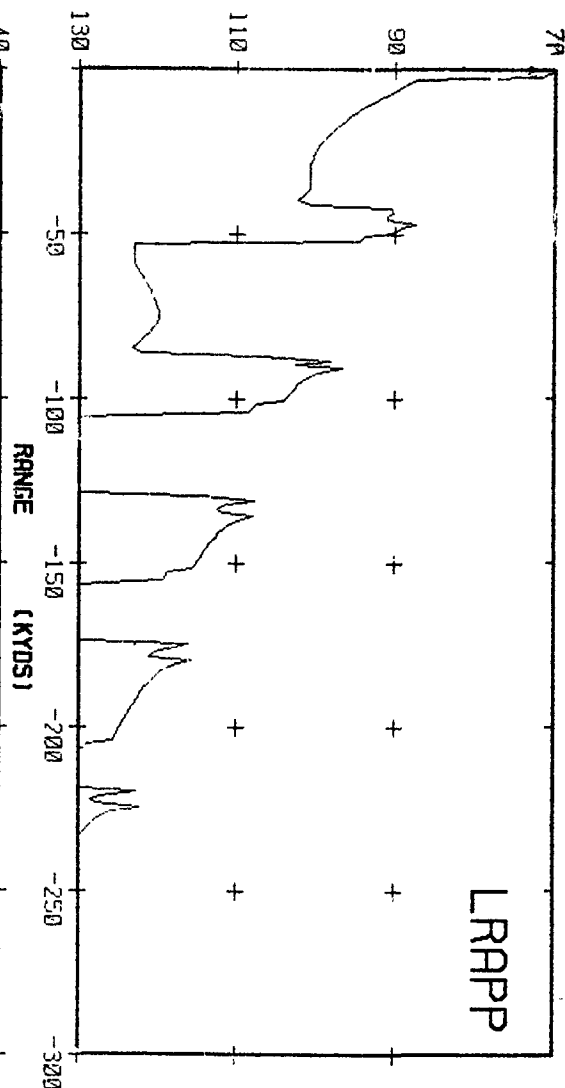


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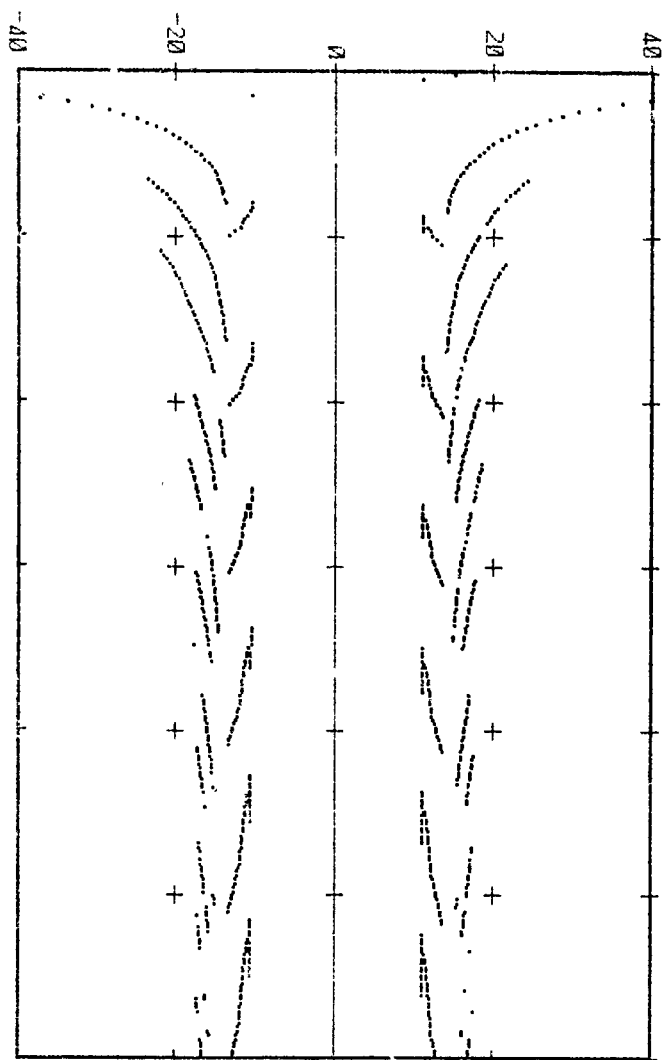
S 20 R 1000 F 2500

LRAPP

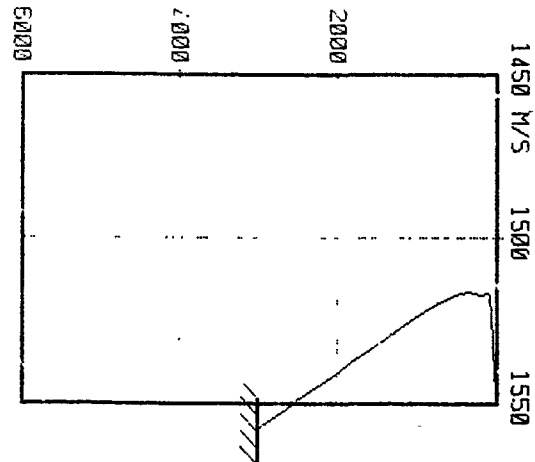
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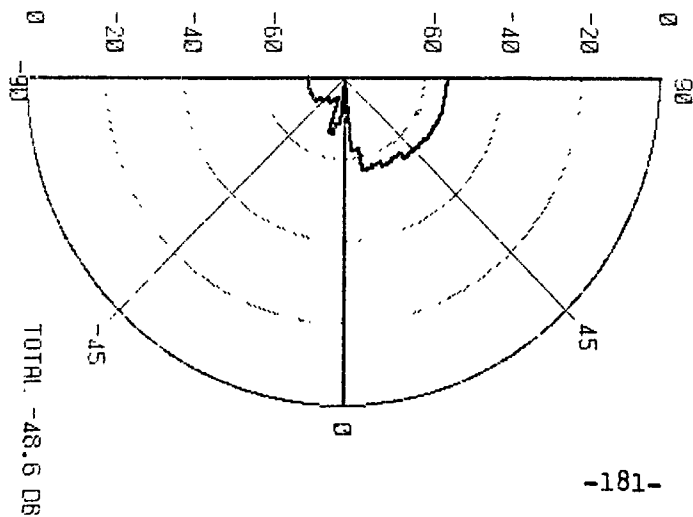
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

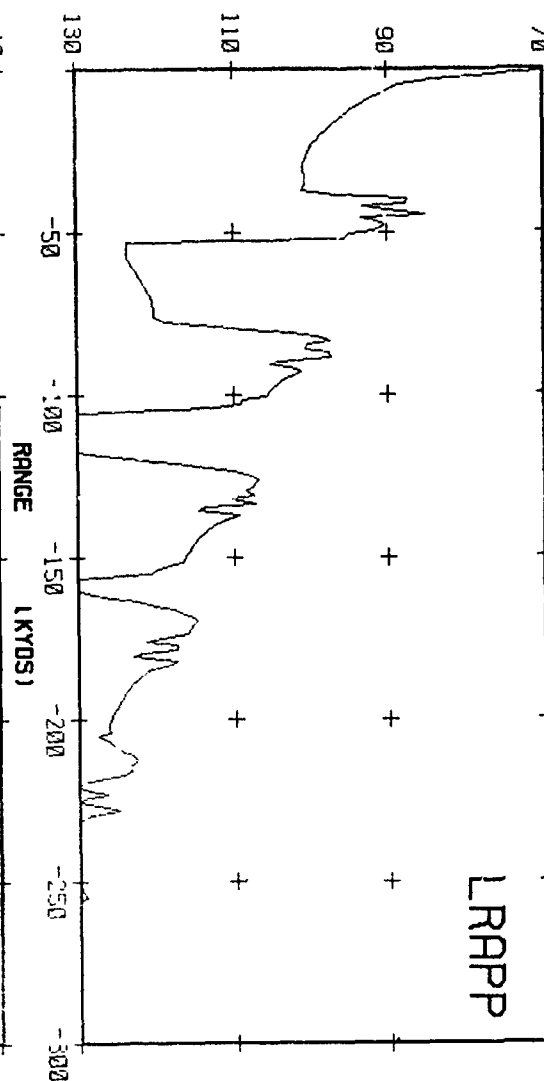


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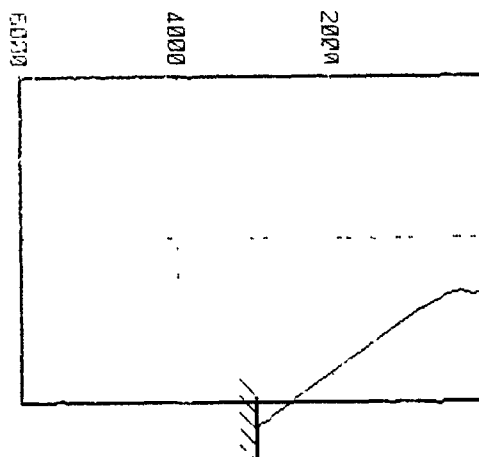
S 50 R 1000 F 2500

1450 M/S 1500 1550

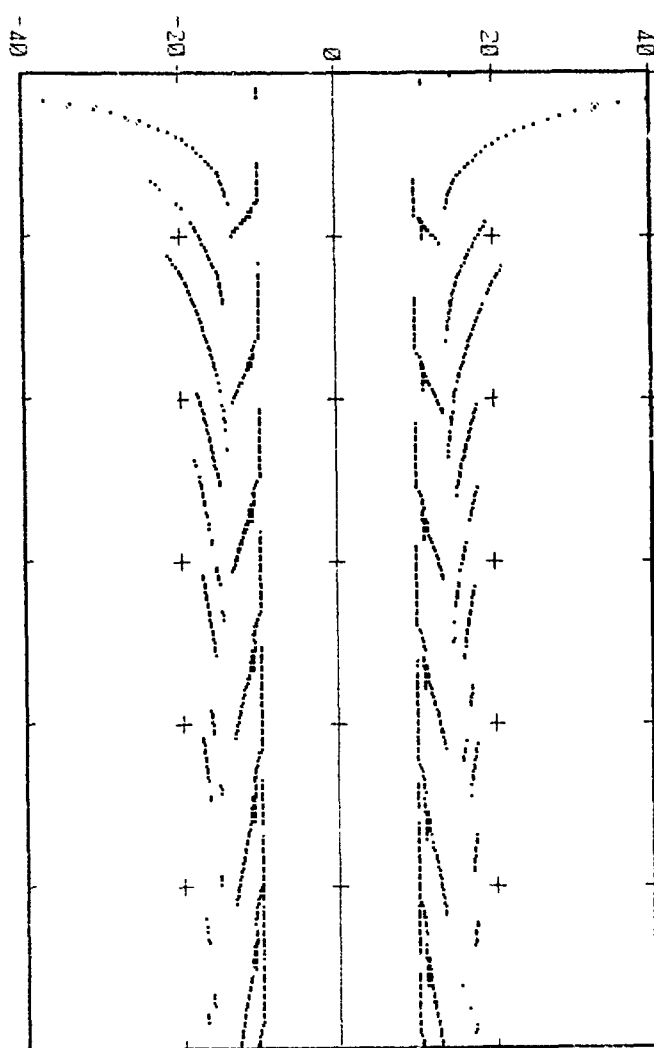
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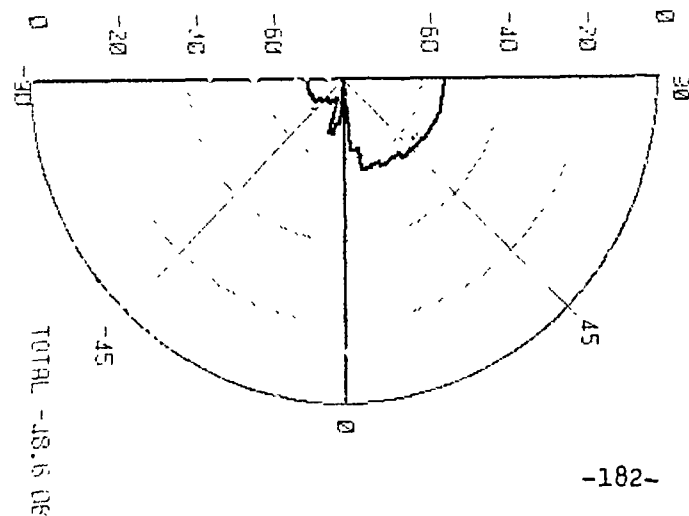
DEPTH IN METERS



ARRIVAL ANGLE



NOISE (DB)

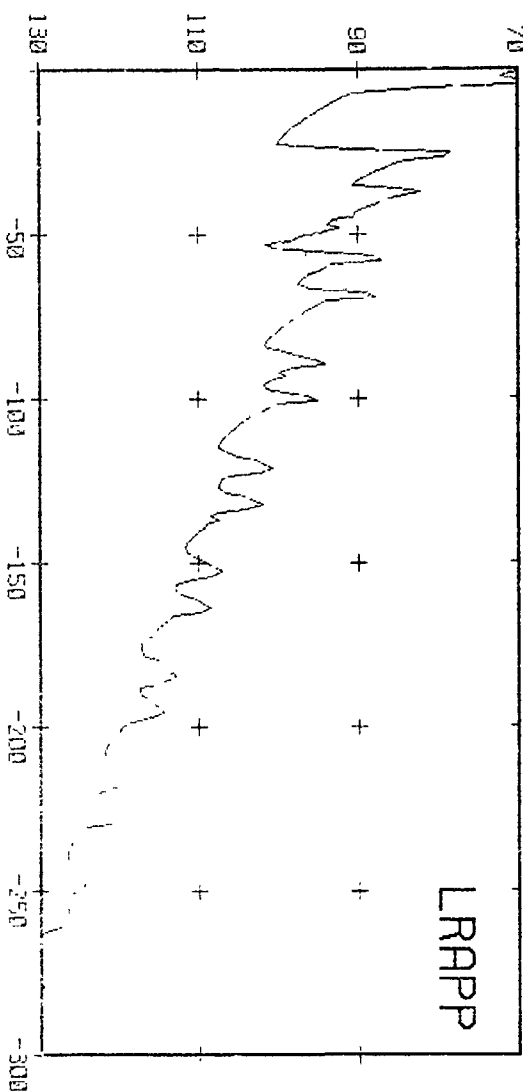


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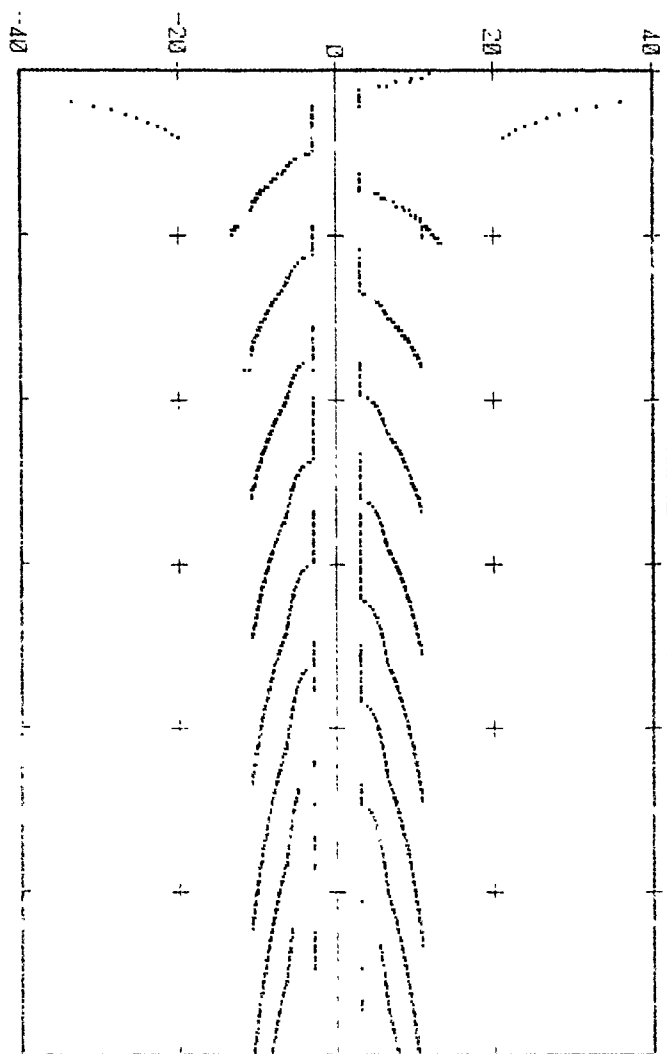
S 233 R 1000 F 2500

1450 M/S 1500 1550

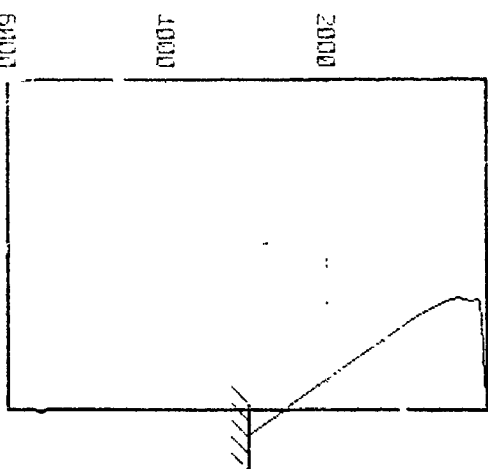
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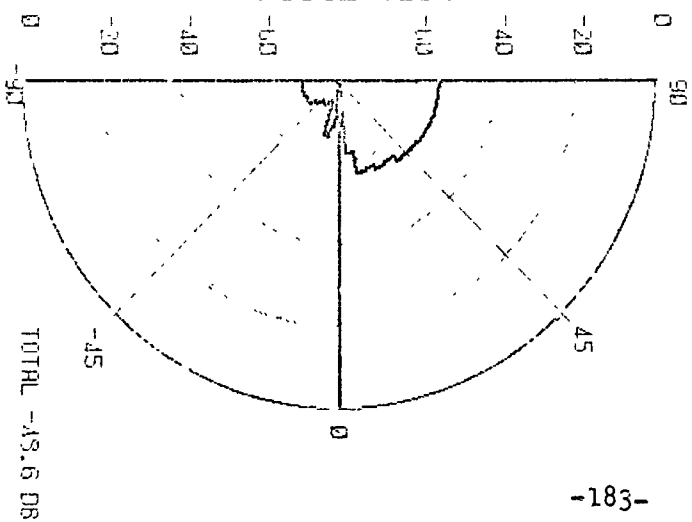
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)



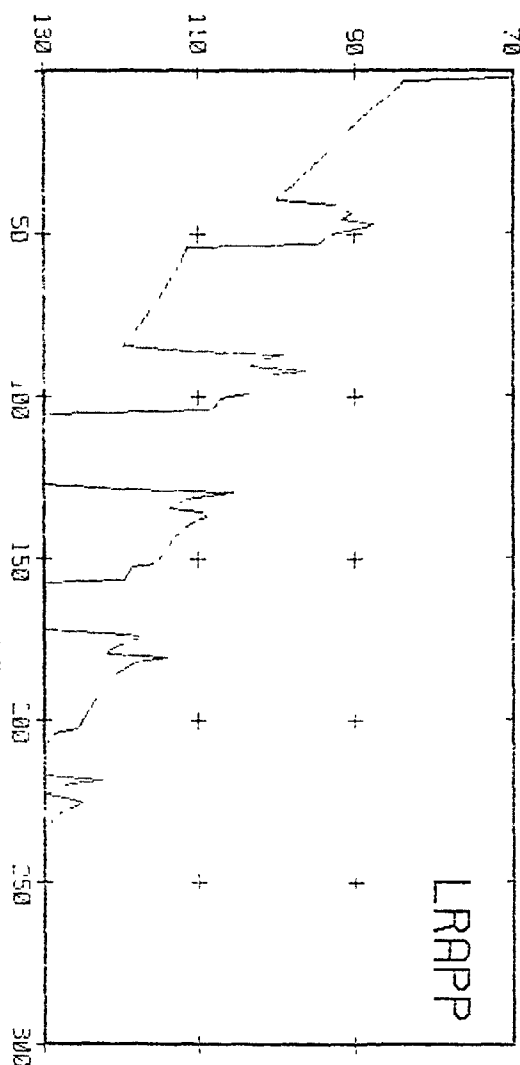


ANER 38 SUMMER

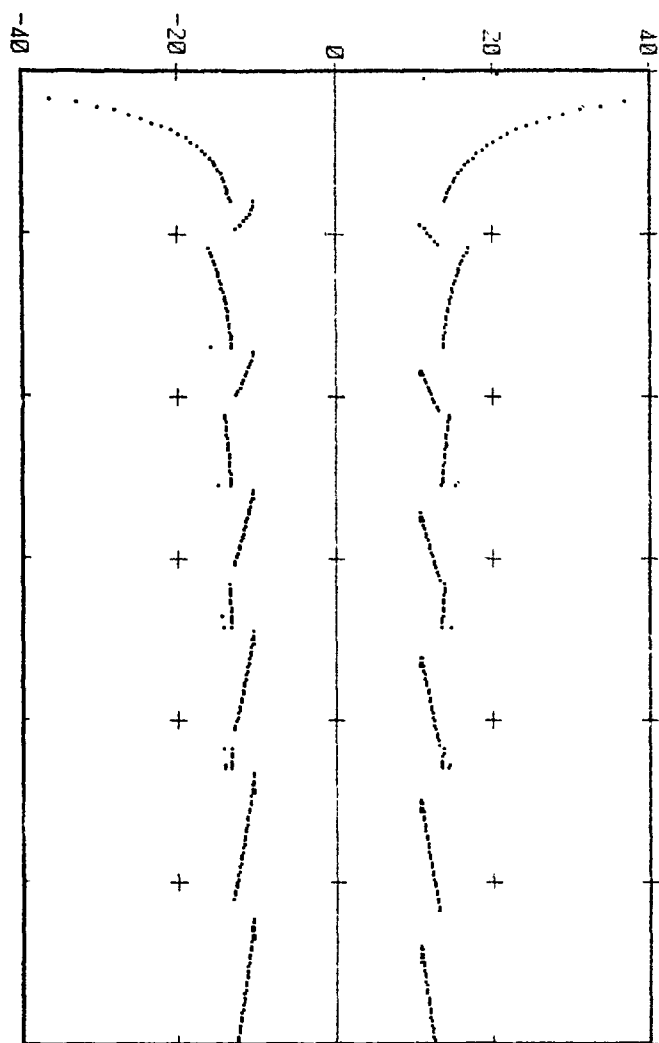
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LRAPP

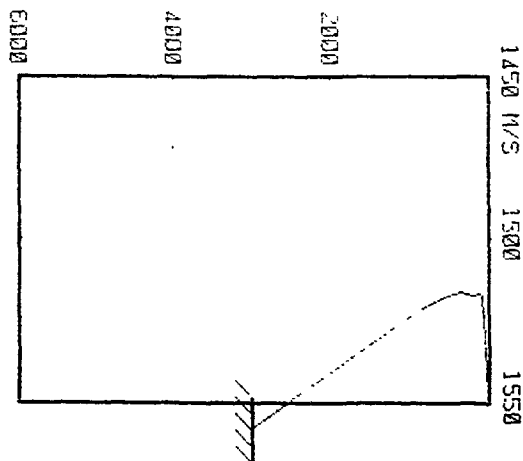
DB LOSS



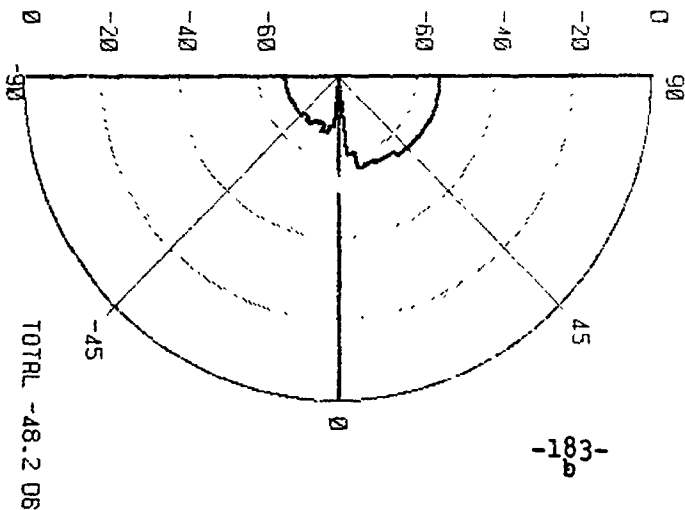
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)

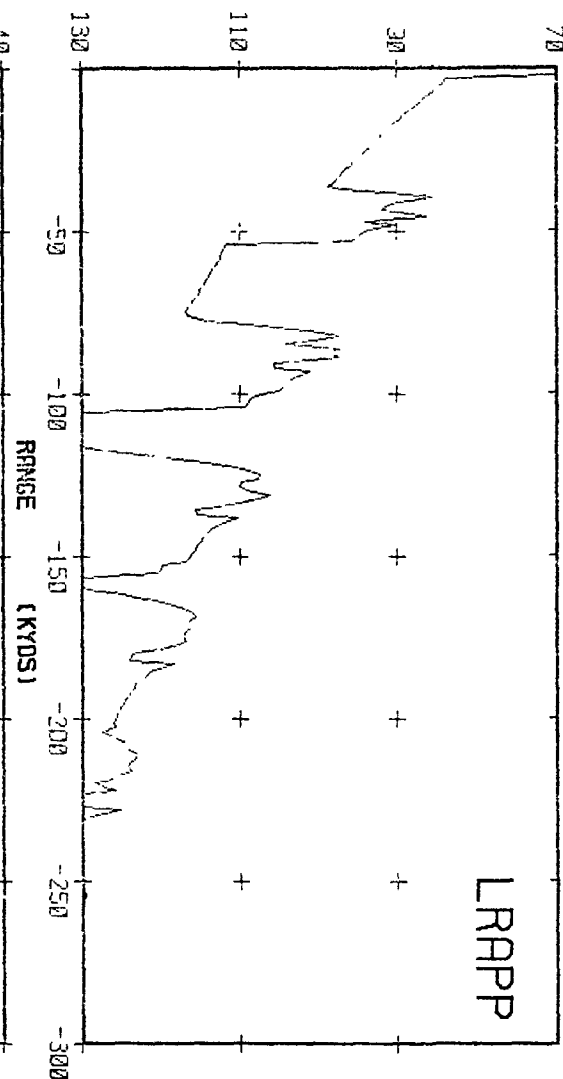


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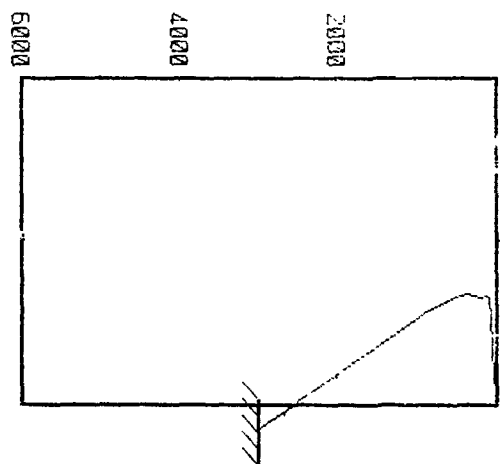
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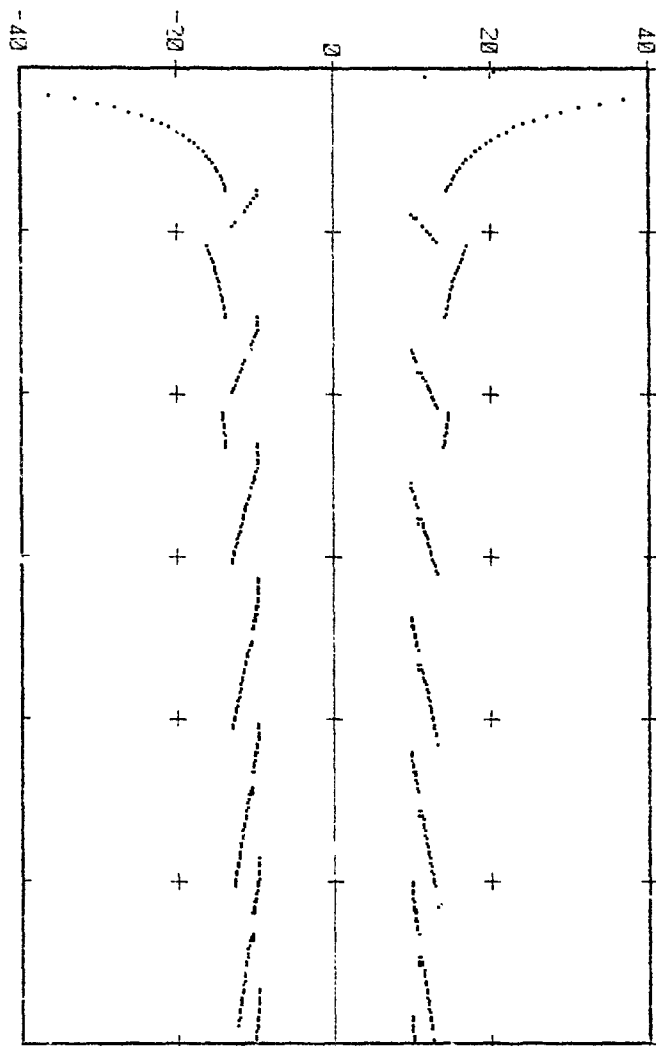
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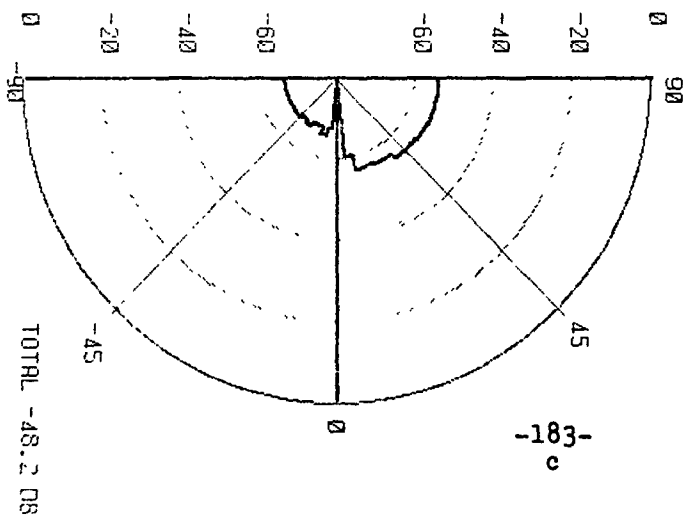
DEPTH IN METERS



ARRIVAL ANGLE



NOISE (DB)



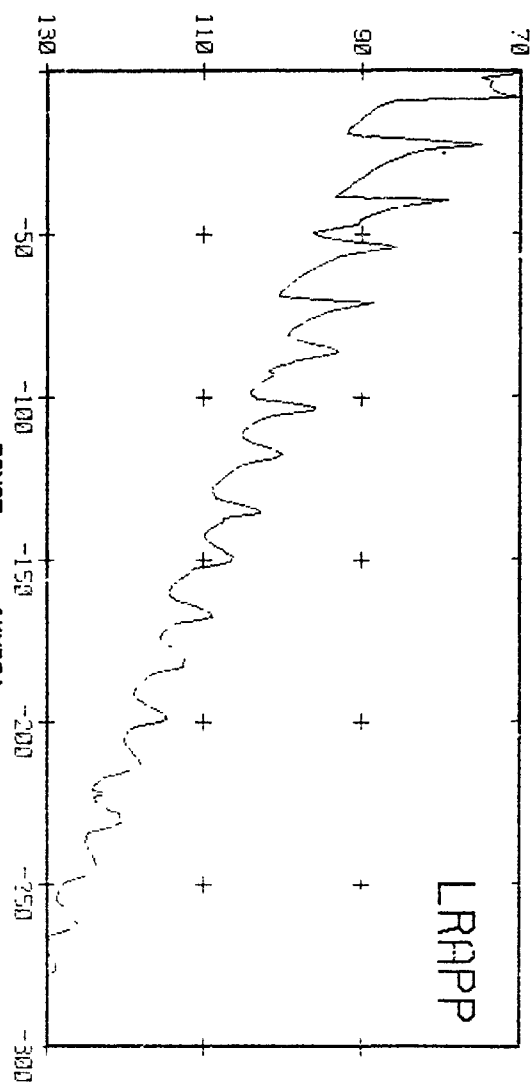
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AREA 36 SUMMER

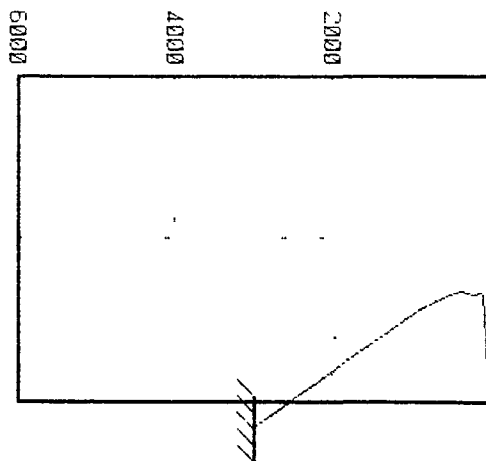
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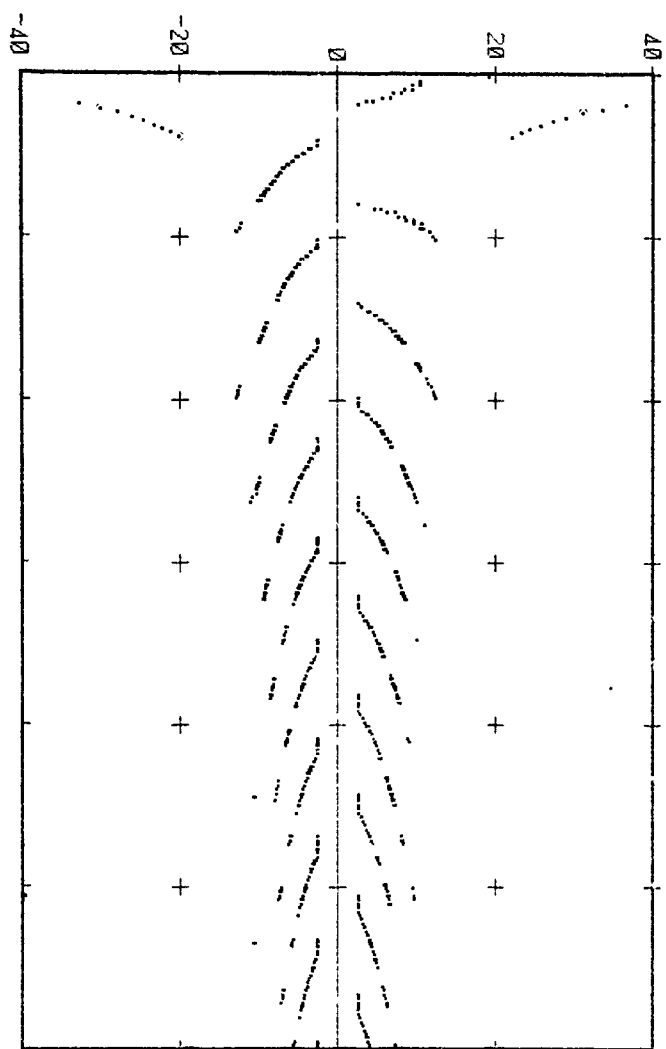
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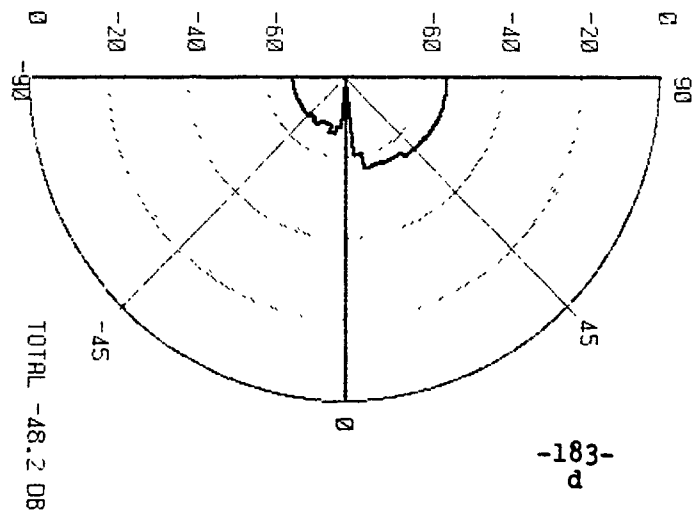
DEPTH IN METERS



ARRIVAL ANGLE



NOISE (DB)



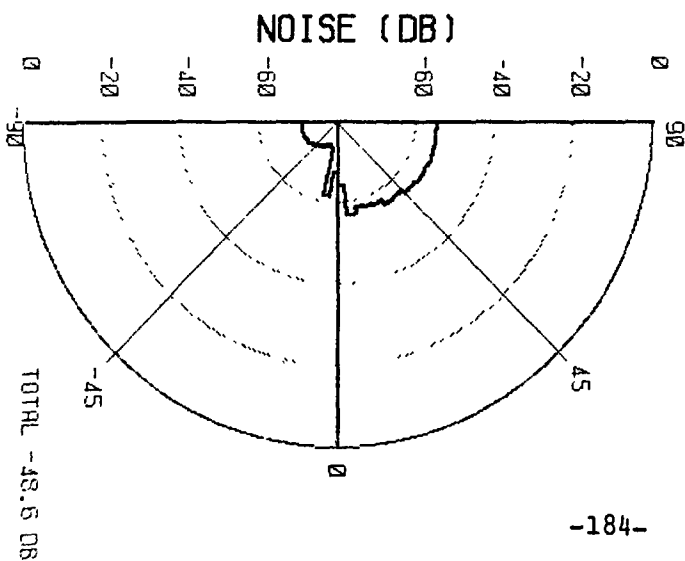
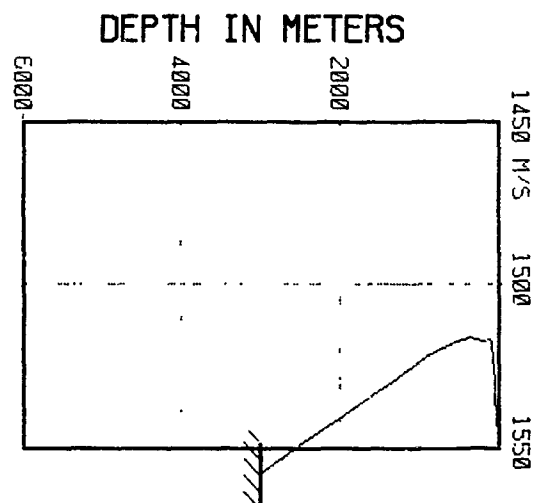
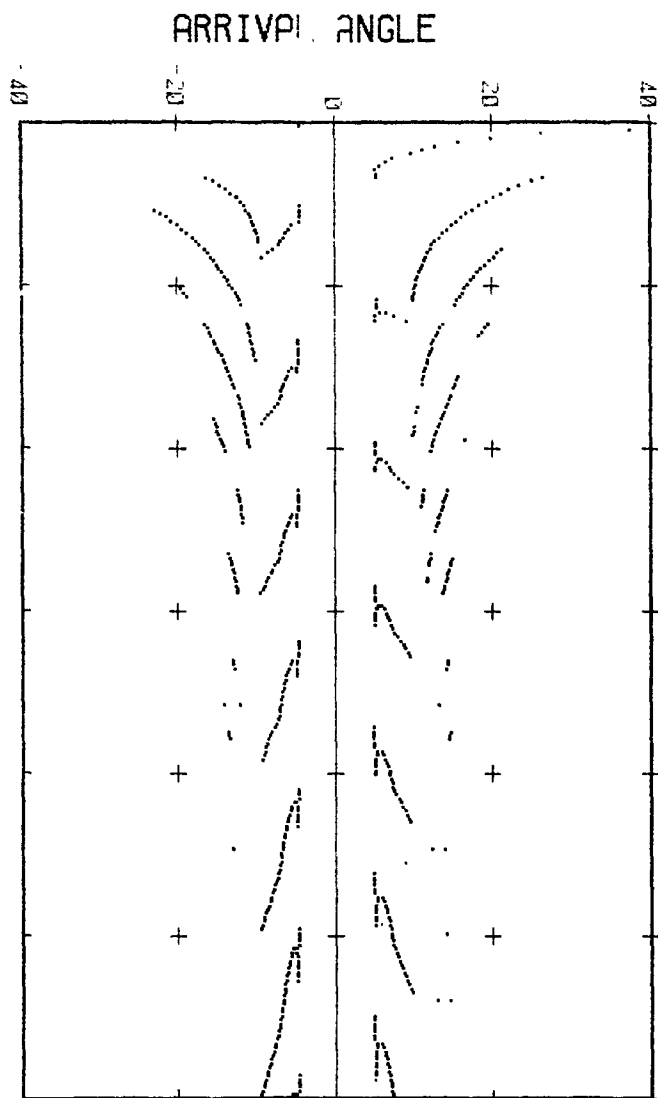
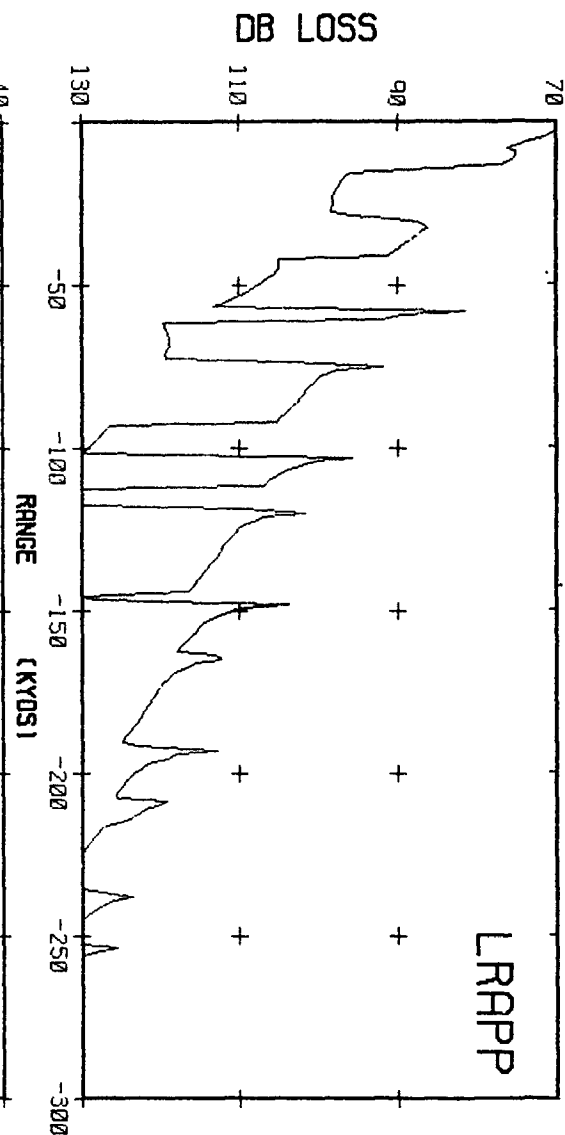
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TOTAL -48.2 DB

AREA 3B SUMMER

S 20 R 6000 F 2500

LRAPP

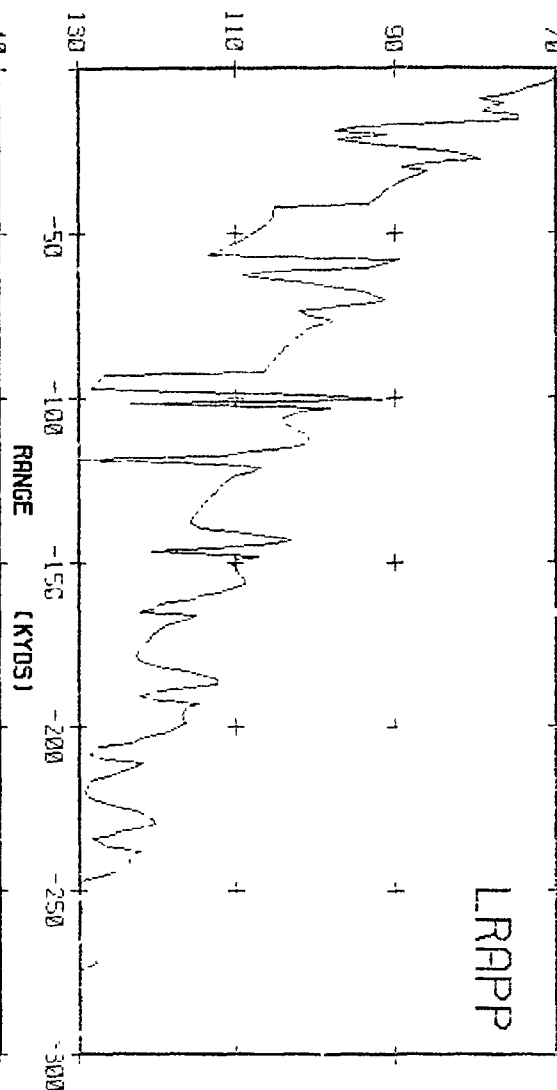


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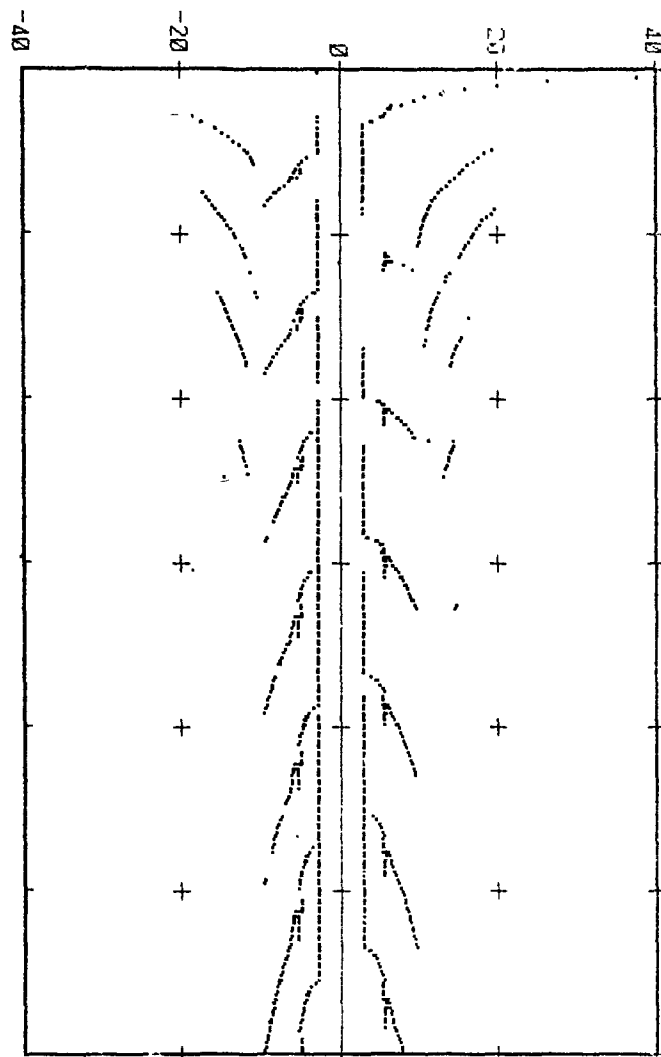
S SW R 6000 F 2500

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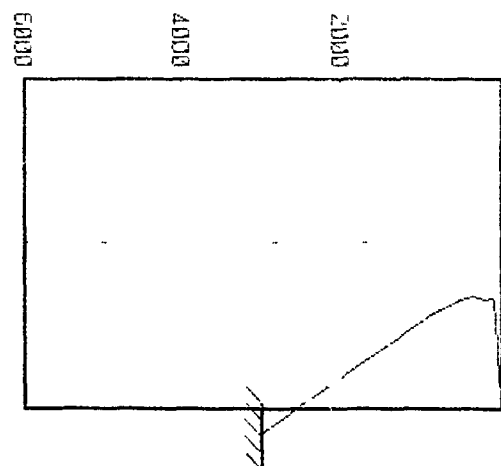
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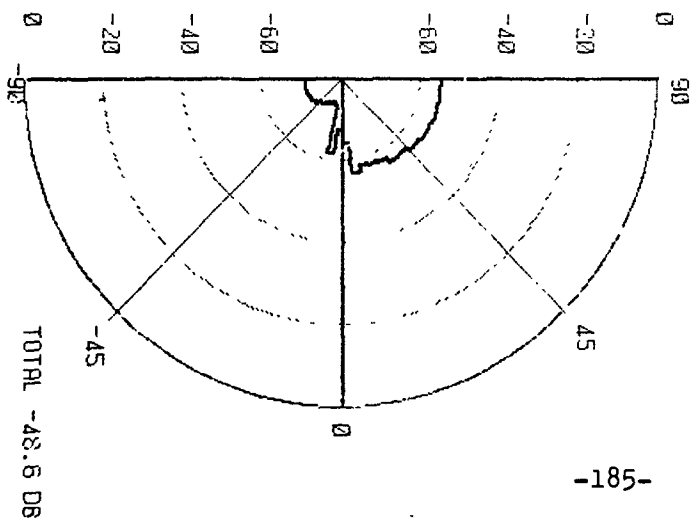
ARRIVAL ANGLE

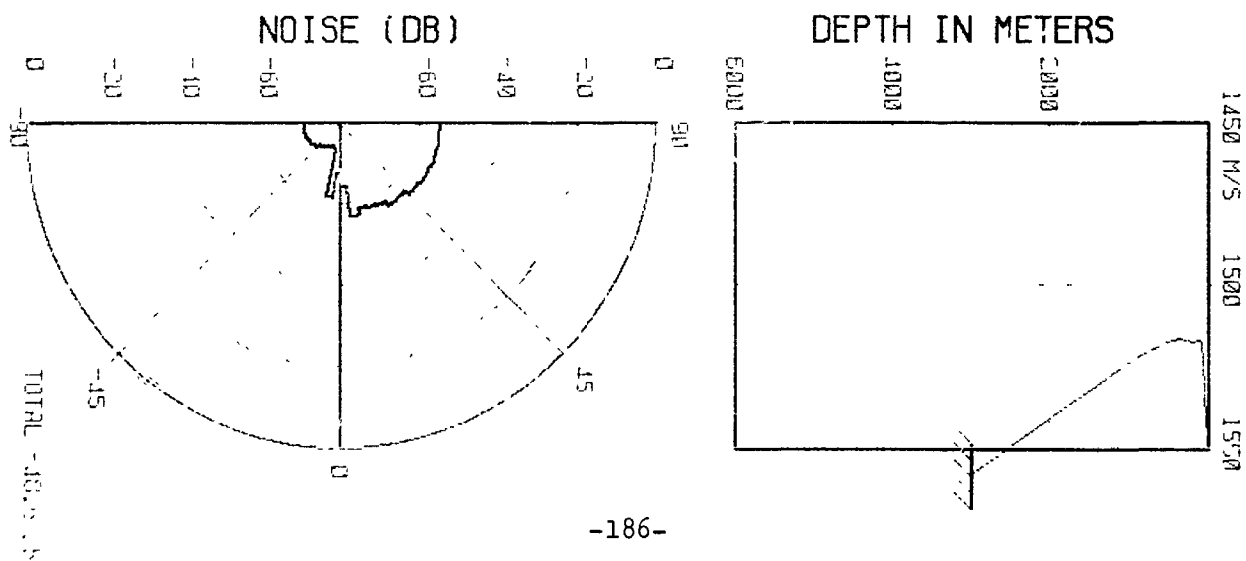
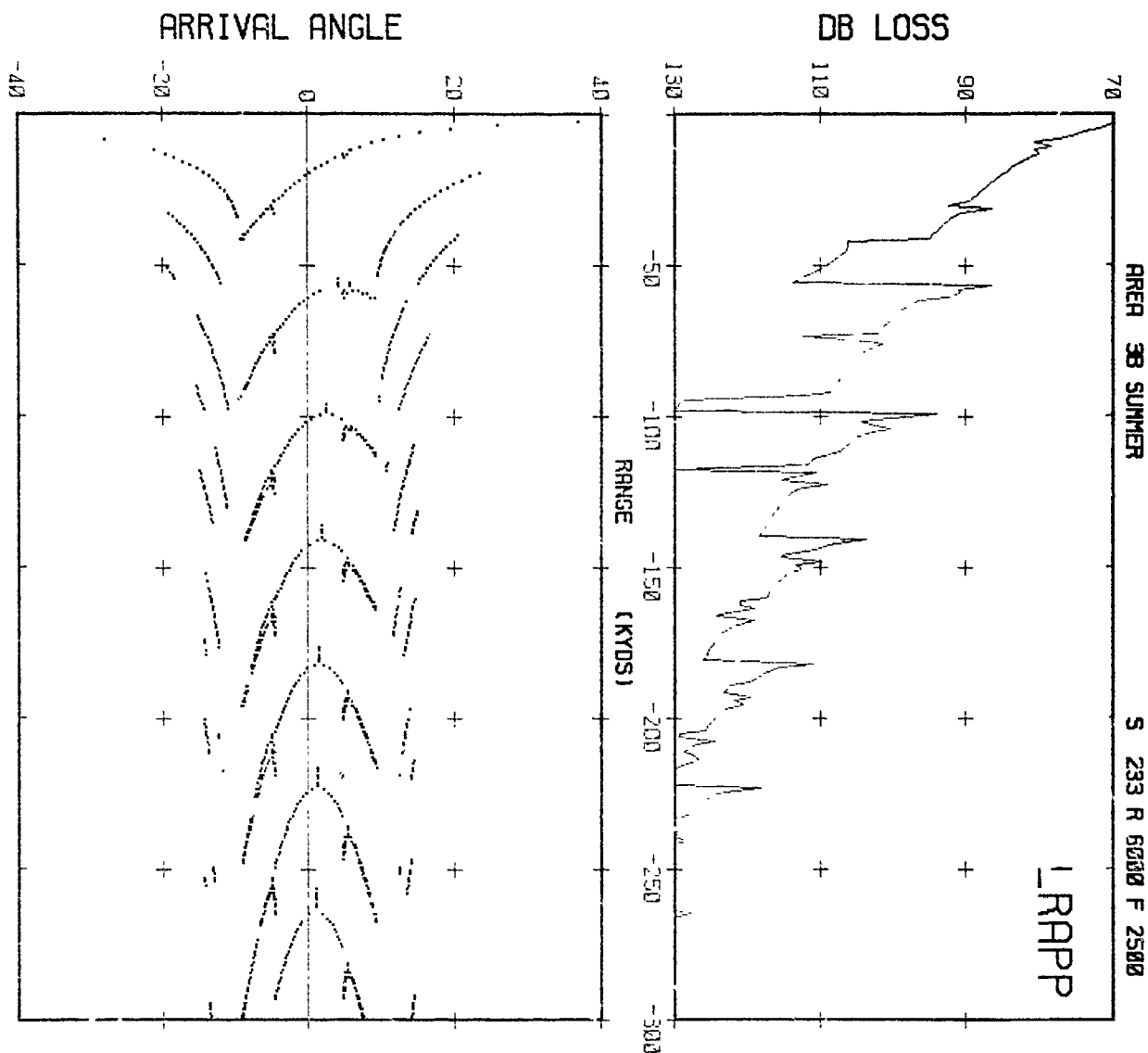


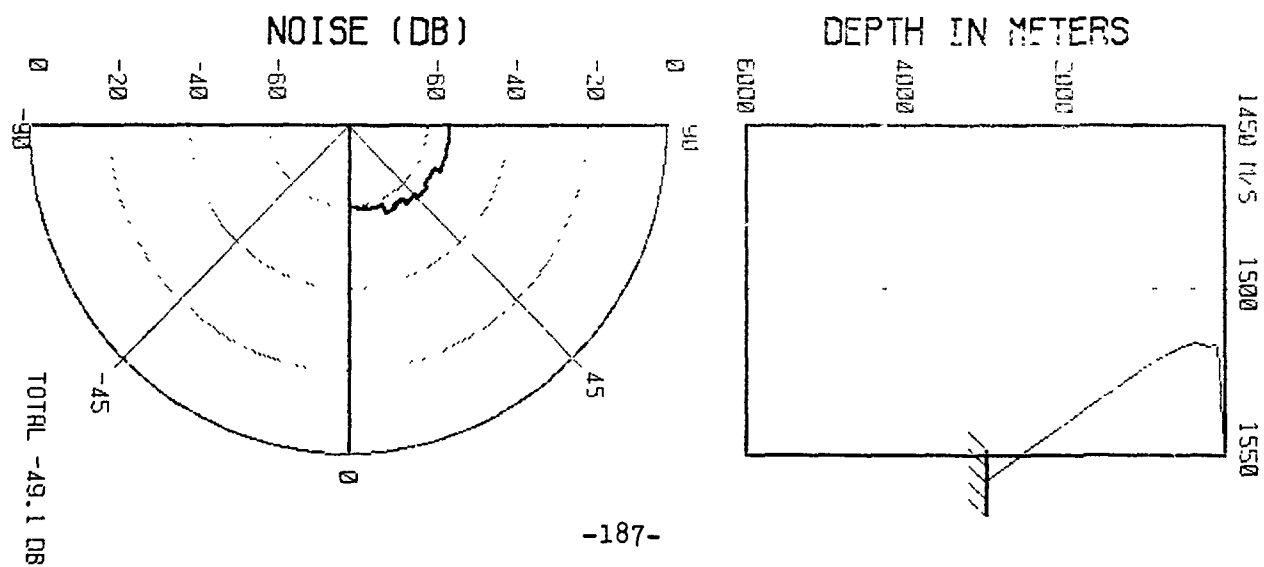
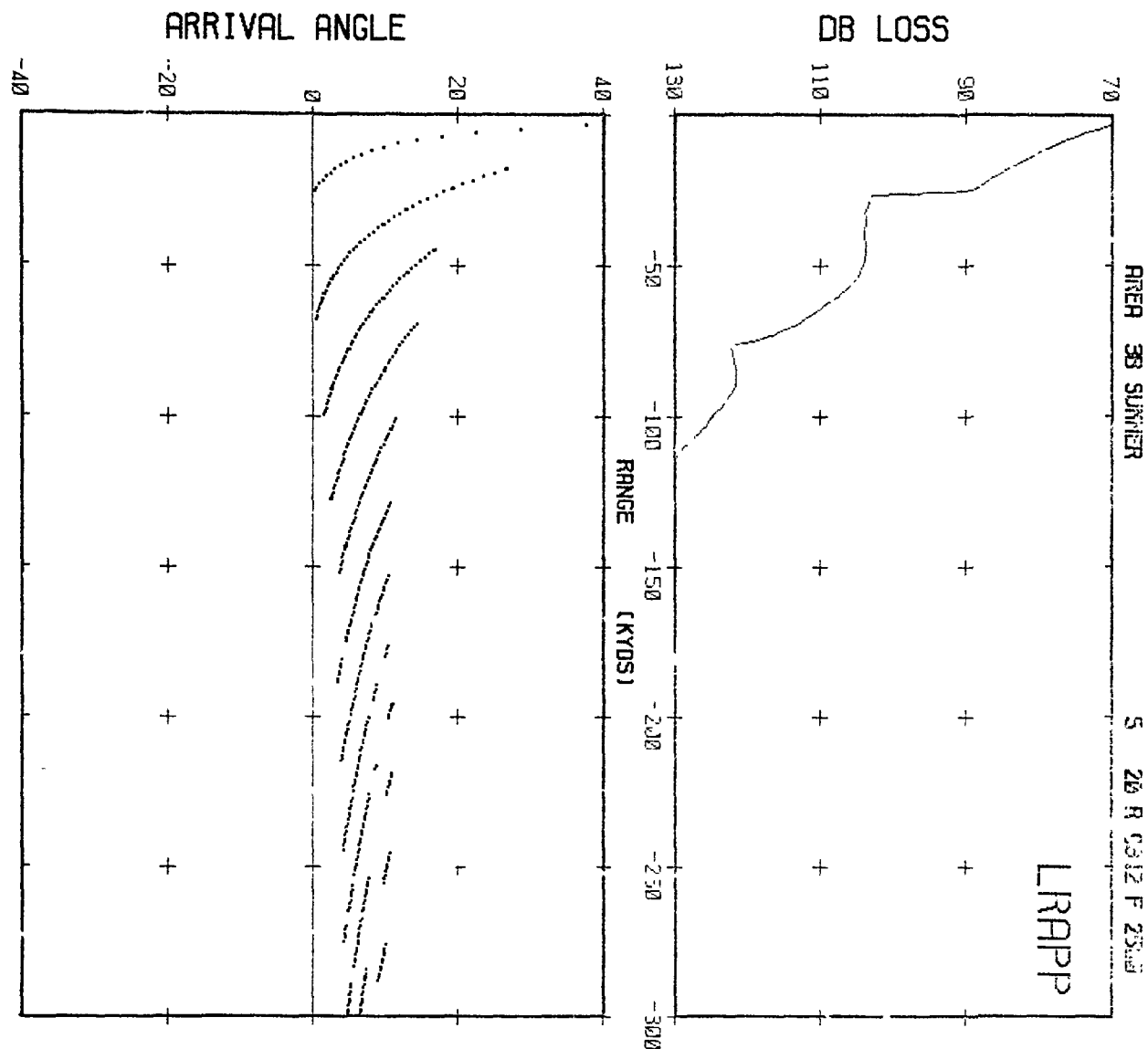
DEPTH IN METERS

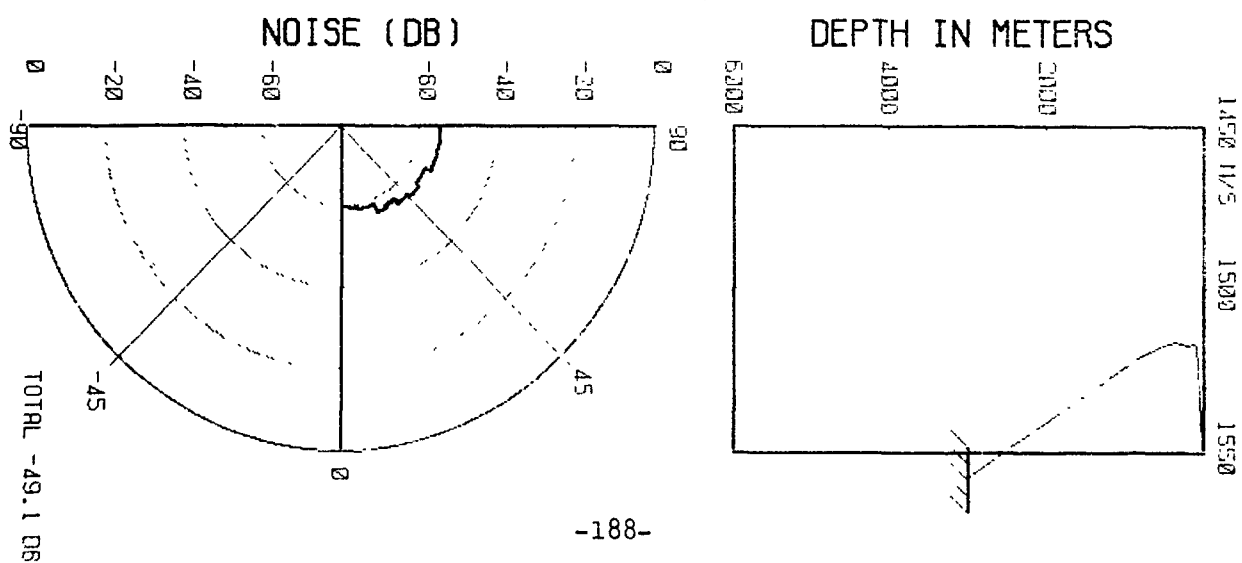
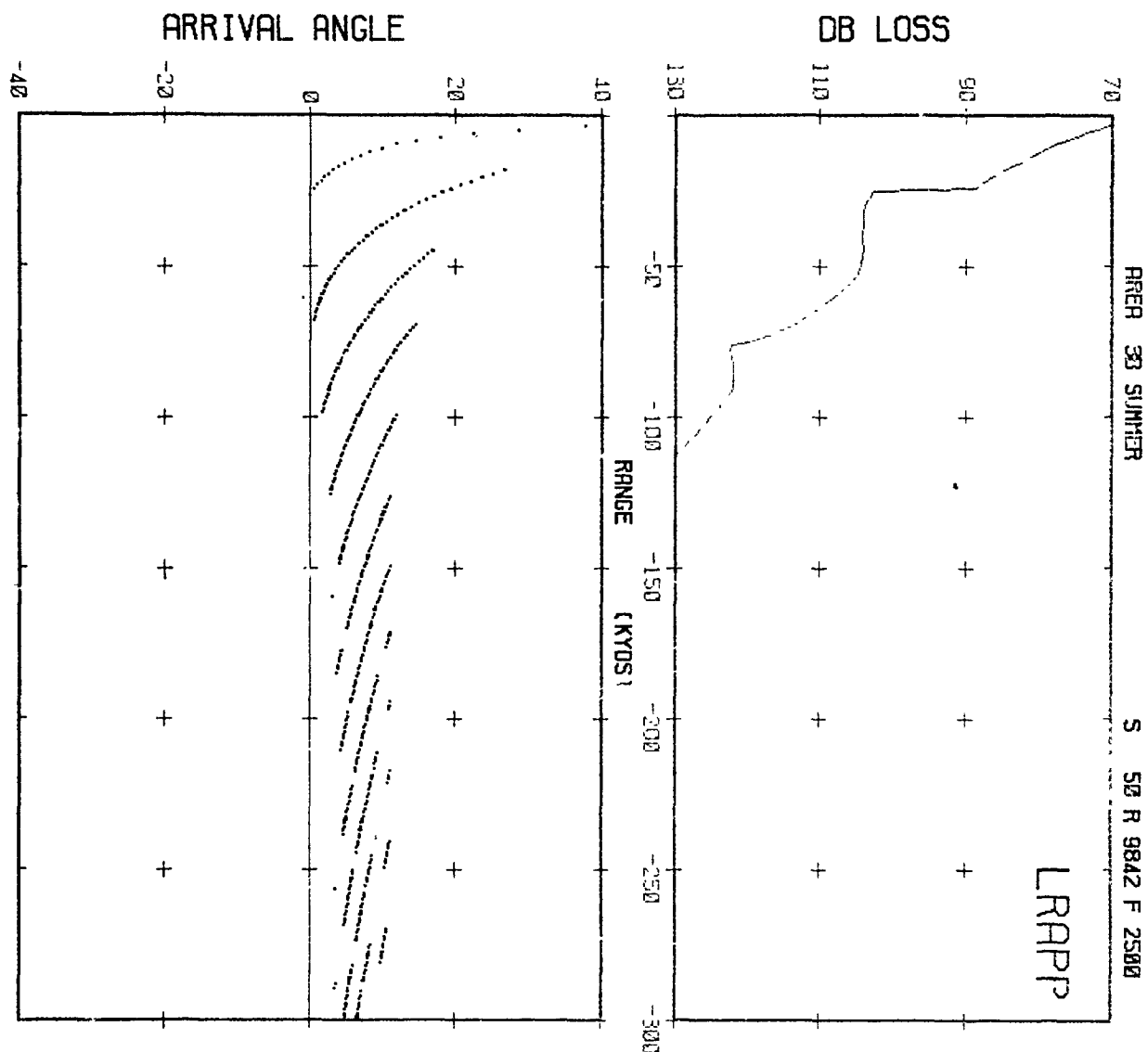


NOISE (DB)









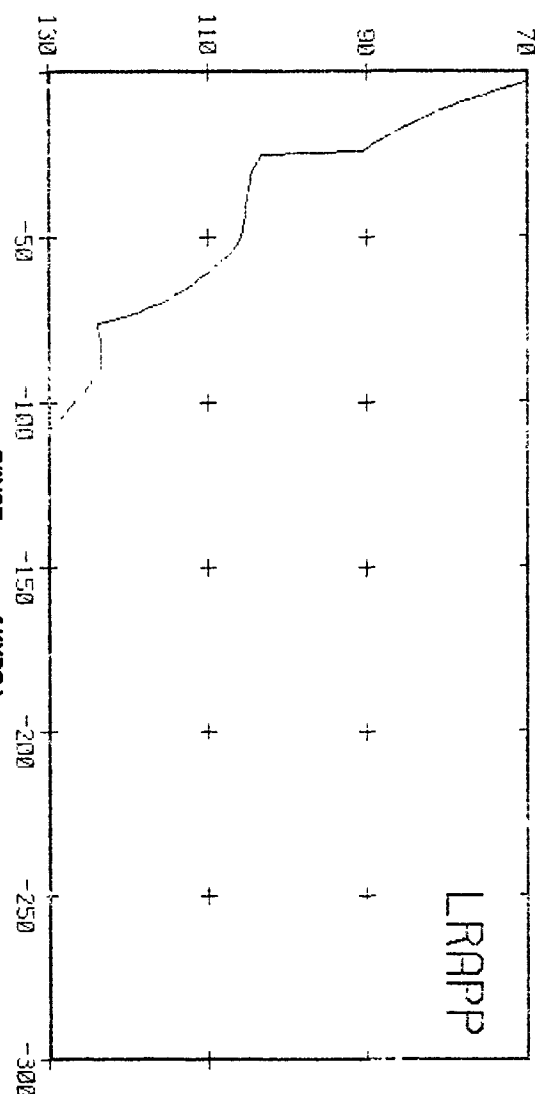


FINCH 33 91/10/73

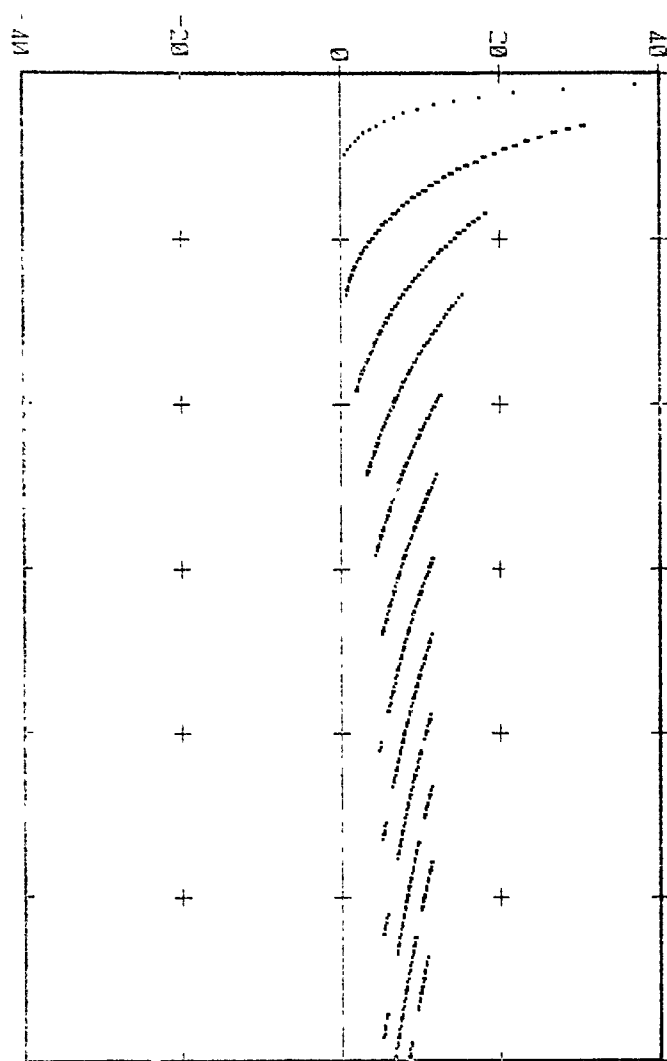
S 233 R 9842 F 2500

LRAPP

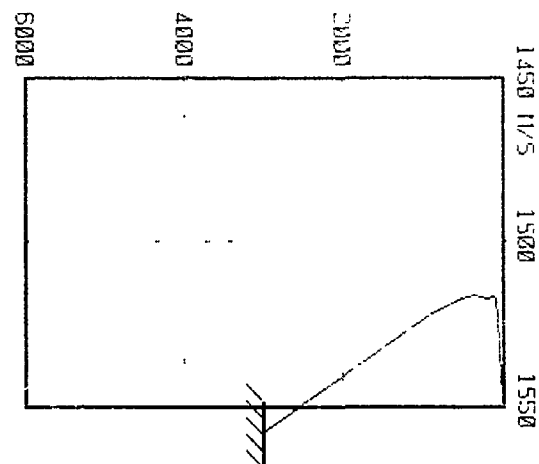
DB LOSS



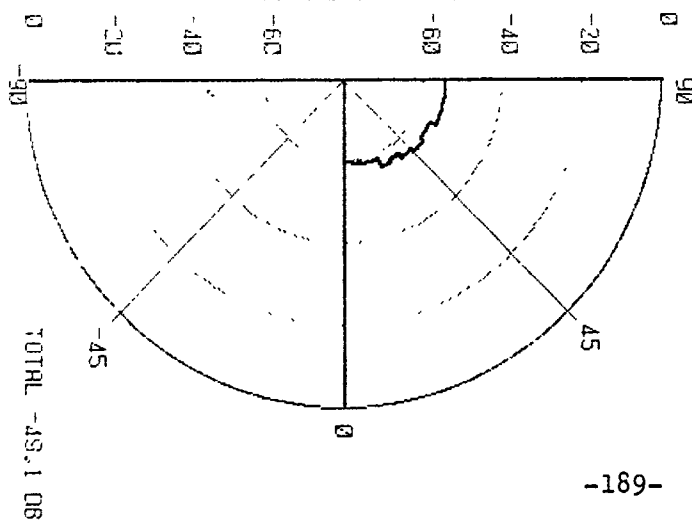
ARRIVAL ANGLE



DEPTH IN METERS



NOISE (DB)





**DEPARTMENT OF THE NAVY**

OFFICE OF NAVAL RESEARCH  
875 NORTH RANDOLPH STREET  
SUITE 1425  
ARLINGTON VA 22203-1995

IN REPLY REFER TO:

5510/1  
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31 Jan 06

**MEMORANDUM FOR DISTRIBUTION LIST**

**Subj: DECLASSIFICATION OF LONG RANGE ACOUSTIC PROPAGATION PROJECT (LRAPP) DOCUMENTS**

**Ref: (a) SECNAVINST 5510.36**

**Encl: (1) List of DECLASSIFIED LRAPP Documents**

1. In accordance with reference (a), a declassification review has been conducted on a number of classified LRAPP documents.
2. The LRAPP documents listed in enclosure (1) have been downgraded to UNCLASSIFIED and have been approved for public release. These documents should be remarked as follows:

Classification changed to UNCLASSIFIED by authority of the Chief of Naval Operations (N772) letter N772A/6U875630, 20 January 2006.

DISTRIBUTION STATEMENT A: Approved for Public Release; Distribution is unlimited.

3. Questions may be directed to the undersigned on (703) 696-4619, DSN 426-4619.

A handwritten signature in black ink, appearing to read "B. F. Link", is positioned above the typed name.

BRIAN LINK  
By direction

Subj: DECLASSIFICATION OF LONG RANGE ACOUSTIC PROPAGATION PROJECT  
(LRAPP) DOCUMENTS

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WHOI  
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# Declassified LRAPP Documents

Report Number	Personal Author	Title	Publication Source (Originator)	Pub. Date	Current Availability	Class.
Unavailable	Unavailable	ACOUSTIC ENVIRONMENTAL SCENARIOS AND PREDICTIONS FOR ASW. VOLUME VII. AREA 3A SUMMER PREDICTIONS FOR PASSIVE SONAR	Maury Center for Ocean Science	721001	AD0910342	U
Unavailable	Unavailable	ACOUSTIC ENVIRONMENTAL SCENARIOS AND PREDICTIONS FOR ASW. VOLUME VIII. AREA 3B WINTER PREDICTIONS FOR PASSIVE SONAR	Maury Center for Ocean Science	721001	AD0910343	U
Unavailable	Unavailable	ACOUSTIC ENVIRONMENTAL SCENARIOS AND PREDICTIONS FOR ASW. VOLUME IX. AREA 3B SUMMER PREDICTIONS FOR PASSIVE SONAR	Maury Center for Ocean Science	721001	AD0910344	U
Unavailable	Unavailable	ACOUSTIC ENVIRONMENTAL SCENARIOS AND PREDICTIONS FOR ASW. VOLUME V. AREA 2 SUMMER PREDICTIONS FOR PASSIVE SONAR	Maury Center for Ocean Science	721001	AD0911224	U
Unavailable	Unavailable	ACOUSTIC ENVIRONMENTAL SCENARIOS AND PREDICTIONS FOR ASW. VOLUME XI. AREA 4A SUMMER PREDICTIONS FOR PASSIVE SONAR	Maury Center for Ocean Science	721001	AD0912560	U
Unavailable	Unavailable	ACOUSTIC ENVIRONMENTAL SCENARIOS AND PREDICTIONS FOR ASW. VOLUME X. AREA 4A WINTER PREDICTIONS FOR PASSIVE SONAR	Maury Center for Ocean Science	721001	AD0916556	U
MC-011 VOL. 14	Unavailable	ACOUSTIC ENVIRONMENTAL SCENARIOS AND PREDICTIONS FOR ASW. VOLUME XIV. AREA 5 WINTER PREDICTIONS FOR PASSIVE SONAR	Maury Center for Ocean Science	721001	AD0916557; ND	U
MC-011 VOL. 13	Unavailable	ACOUSTIC ENVIRONMENTAL SCENARIOS AND PREDICTIONS FOR ASW. VOLUME XIII. AREA 4B SUMMER PREDICTIONS FOR PASSIVE SONAR	Maury Center for Ocean Science	721001	AD0916610; ND	U
MCR008	Goodman, R. R., et al.	THE NEAT 1 EXPERIMENT (U)	Maury Center for Ocean Science	721001	NS; ND	U
Unavailable	Cherry, W. R.	LRAPP BEAMFORMER	Scripps Institution of Oceanography Marine Physical Laboratory	721015	ADA081876	U
ONR ACR-186	Gregory, J. B.	PROJECT LRAPP TEST BED- TECHNOLOGY USED IN THE DEVELOPMENT OF A DEEP-OCEAN STABLE PLATFORM (U)	Office of Naval Research	721024	AD 52-3370 <del>AD 52-3370</del> , ND	U
MC-010	Unavailable	CHURCH GABBRO EXERCISE PLAN- LRAPP (U)	Maury Center for Ocean Science	721026	ND	U
WHOI-72-87	Daubin, S. C., et al.	THE ACODAC SYSTEM	Woods Hole Oceanographic Institution	721101	AD0756628; ND	U
NRLR7516	Fleming, H. S., et al.	PROJECT NEAT 1 ENVIRONMENTAL DATA REPORT (U) (USNS J.W. GIBBS)	Naval Research Laboratory	721129	NS; ND <del>AD 52-3370</del>	U